THE

Journal of the American Medical Association.

EDITED UNDER THE DIRECTION OF THE BOARD OF TRUSTEES.

PUBLISHED WEEKLY.

VOL. XIV. CHICAGO, APRIL 19, 1890. No. 16.

ORIGINAL ARTICLES.

CANCER OF THE LARYNX.—REPORTS OF TWO CASES.

Read by title in the Section of Laryngology and Otology at the Fortieth Annual Meeting of the American Medical Association, held at Newport, June, 1889.

BY H. A. JOHNSON, M.D.,

OF CHICAGO, ILL.

Two years ago I reported to the American Laryngological Association five cases of cancer of the larynx. The subject has engaged the attention of the profession since to a greater degree than before, and the history of the disease has become more fully known. The question as to what to do with a cancer of the larynx has not, however, been made any more evident. The exaggerated tendency to operation in all cases of surgical troubles, largely the result of, first, the use of anæsthesia, and, second, from the discovery and application of antiseptic methods and agents, has led the profession to consider lightly the dangers of operation and, consequently, to resort to them in cases in which the conditions justifying an operation are as yet perhaps not sufficiently known. At any rate, the question of extirpation of the larynx cannot be considered as beyond the experimental stage. The study of a larger number of cases is necessary in order to enable one to formulate the indications in any given instance.

The history of a case celebrated more on account of the exalted position of the patient than for any especial facts in its course or termination has led to much additional discussion as to the management of this affection. As a contribution to the history of the disease I beg to report to the Section the brief notes of two cases that have come under my observation within the last year.

Case 6 of my series.—M. B. S., æt. 55 years; male; married and the father of several children; of regular habits, and always in good health till the advent of the present trouble. Consulted me in August, 1888, for a "sore throat." I had known him for many years, but had not been his physician. A brother had died a few months before from some malignant disease—a sarcoma, as I understood. His father and mother lived to old age, and no other members of the family have had any malignant or tubercular trouble.

There was no evidence of any specific trouble. He had never had any severe illness, has not been subject to sore throat or to colds, and up to July, 1887, has had nothing to attract his attention to the throat. About that time, however, he began to experience, at times, some discomfort in talking; his voice began to be husky, not all of the time, but at intervals. He attributed this to cold and did nothing for it, or only used such domestic remedies as were suggested by the family. The huskiness continued, and in the December following he consulted a physician. There was at that time some soreness of the larynx. The examination disclosed what was pronounced to be an ulceration of the larynx. I am unable to learn whether or not a laryngoscope was used in this examination. A spray was used, and he thought his condition was improved. During the spring and summer the trouble, however, grew worse, and for the last sixty days—June and July, 1888, he has had, after exercising or in wet weather, some dyspnœa, and the voice has been entirely extinct. During all this time there has been no actual pain, but a sense of discomfort; there has been cough at times, but not troublesome. The appetite has been good, no difficulty in swallowing, and as he expresses it, he "feels first-rate."

I find, upon external examination, that the cartilages are prominent, symmetrical, movable, and not tender upon pressure or manipulation. The pharynx is red and the secretions are excessive in quantity. There is no change in the structure of the parts. The epiglottis is at its edges well defined and its form normal. The vestibule of the glottis is filled with a growth, especially at the anterior portion, which admits of only sufficient air to meet the demands of the system in a state of rest. The vocal bands could be seen only with difficulty in their cartilaginous portions; subsequently, after the use of cocaine, the cords were seen as narrow whitish bands throughout their entire length. The opening through the vestibule of the larynx was narrow, the walls roughened, and both sides were so nearly alike that it was impossible to say that the tumor was involved one side more than the

other. The posterior portions of the larynx seemed not to be seriously, if at all, implicated.

I was in doubt as to the diagnosis and placed him upon potassium iodide and mercuric iodide. I also applied to the parts, with an atomizer, a solution of iodine in liquid cosmoline. There seemed for a time to be some improvement, but soon the dyspnœa evidently became worse, especially in damp weather, and occasionally in the night during sleep. He had been living in the country, and as a matter of precaution now came into the city, so as to be within reach should tracheotomy be necessary. The potassium iodide was not well borne, and was discontinued. It was on two occasions afterwards tried, but each time it evidently did not act kindly; there was, after a few days, decided loss of strength and impairment of nutrition. Local treatment by means of sprays and vapors was continued, astringents, iodine, carbolic acid, etc. These seemed to give some temporary comfort, but no permanent benefit. In the meantime external observations made it evident that the size of the organ was increasing, and that the enlargement was nearly symmetrical. The question of extirpation was raised, but before any definite opinion was reached tracheotomy became necessary.

Early on the 9th of November he was seized with a paroxysm of dyspnœa, and seemed to be moribund before the operation was completed, though the rapid method was employed. Artificial respiration was kept up for some time. A split Fuller's tube was inserted for convenience in the hurry of the moment, and this was after a few hours replaced by the ordinary form, which, however, was not easily retained, and a Durham tube was substituted. This was worn with great comfort during the remainder of life.

An accident which occurred in the use of this tube I venture to mention. About three weeks after the operation the swelling of the external tissues had subsided and I loosened the collar of the tube, with the thought of shortening the transverse portion—in other words, of bringing the collar down close upon the surface, so as to prevent undue pressure against the posterior wall of the trachea. I loosened the collar by turning the set screw. I concluded, however, not to make the change for the present, and tightened, as I had supposed, the binding screw. During the evening a severe fit of coughing came on and the nurse telephoned me that the patient had coughed out the tube. I at once hurried to the bedside and found the bands around the neck in place, with the collar of the tube over the tracheal opening, while the nurse had in her hand the inner tube, which had been, by a violent cough, thrown to the foot of the bed; the outer tube was nowhere to be found. I carefully examined the opening into the trachea; could see well the tracheal walls, but no tube. The patient breathed easily and, in answer to my questions, said he felt no discomfort; no cough. Upon further questioning the nurse I found that after cleansing the inner tube she attempted to introduce it, but did not succeed. She saw the outer tube in place before trying to introduce it, but could not see it afterwards. My patient was not in the least incommoded by a large size Durham tube, evidently resting somewhere in the respiratory tract. With a long probe I searched for it and found its upper end about two inches below the tracheal opening. With a pair of Mackenzie's laryngeal forceps I was able to seize the tube and extract it. It evidently did not come up as easily as it went down. The old proverb, "*facilis descensus*," etc. No harm came from it, but I at once made a flange on the upper end of the outer tube, so that it should be impossible for the accident to occur again.

During the whole history of the case there was but little pain. For the first few weeks after the operation the cough was troublesome and the expectoration muco-purulent. Later the expectoration was small in amount and mucous. There was at no time, or until the last day or two, difficulty in swallowing liquids, and only during the last few weeks difficulty in swallowing solids. There was no swelling of the lymphatics, so far as could be determined by careful palpation before or after death. The post mortem examination was limited to a section through the larynx, permitting an examination of the posterior walls of the trachea and larynx, and of the œsophagus. The latter was healthy, and the posterior portion of the larynx was involved only to a limited extent. The trachea below the canula was not ulcerated and presented the ordinary appearance of catarrhal inflammation. Evidently no injury had been done by the mechanical pressure of the tube. A section from the anterior portion of the larynx, including the cartilages, membranes and superficial tissues, was removed, and, upon microscopic examination, presented all the characteristics of carcinoma.

The death of the patient was from asthenia. There was no evidence of secondary carcinoma anywhere. For the two weeks preceding death there was frequent small pulse, Cheyne-Stokes respiration, anorexia and insomnolence.

Soon after the tracheotomy Dr. E. Fletcher Ingals saw him with me in consultation, and the question was again raised as to the propriety of extirpation. We neither of us thought the operation advisable. A peculiar feature of this case is the development from within anteriorly, leaving the posterior walls of the organ nearly or quite intact.

Of the five cases reported to the Laryngological Association by the author, all experienced difficulty in deglutition.

It is of course impossible now to say what was

the initial lesion, but the first symptom was hoarseness. So far as I know there was no laryngoscopic examination made at that time. The patient supposed it to be only a cold; afterwards a physician diagnosed it as ulceration of the larynx, but I was unable to ascertain whether or not a laryngoscopic examination was then made. The transformation of benignant to malignant growths does without question take place elsewhere, and it is possible that the beginning may have been a papilloma; but I conjecture that the origin must have been in the glandular tissue of the ventricles on the vocal cords. The symmetrical development of the growth is, I think, unusual, and I hardly know how to account for it except upon the hypothesis of both ventricles or cords having been invaded about the same time.

The propriety of extirpation, complete or partial, will probably be judged differently by different members of the Association. In view of the statistics of carcinoma and of operations for extirpation, I confess I do not think it likely that life would have been prolonged by extirpation; and yet it belongs to the class of cases in which an operation is usually justifiable.

1. The patient was a male over 50.
2. A brother died from sarcoma or carcinoma.
3. The disease was primary carcinoma.
4. It was intrinsic.
5. It involved the anterior portion of the larynx and was symmetrical.
6. There was dyspnœa early, but no dysphagia till near the termination; then not marked.
7. The lymphatics were not involved.
8. There were no secondary developments.
9. Death was from asthenia.
10. The duration of the disease from the first symptoms was about twenty-one months.
11. The duration after tracheotomy was five months.

An additional case of cancer of the larynx has come under my observation within the last few months.

Case 7 of my series.—M., æt. 53; German; office work; family history good. During last year there was occasional hoarseness lasting a few days each time. For the last few months these attacks have recurred oftener, and for the last two months the hoarseness has been nearly constant. There has been slight difficulty in swallowing solids; particles lodge in the throat and cause cough; no soreness or pain with this. A small lump (deep upper cervical lymphatic ganglion) developed; is not tender and does not increase in size. The salivary secretions are excessive; the voice is whispering, broken; appetite poor; has lost 25 pounds in weight within the last two or three months; attributes this to difficulty in swallowing foods. There is now some dyspnœa. Examination reveals an irregular, ragged growth upon the posterior surface of the epiglottis and the right and posterior walls of the supraglottic space. The extreme border of the epiglottis is swollen and livid, but its form is not lost. The tumor bleeds upon the slightest provocation; even the effort to phonate produces bleeding. Nothing can be seen of the right vocal cord, and only a small segment of the middle portion of the left during phonation.

A second examination about two weeks later revealed no material change, except that there was upon the surface of the growth an ulceration grayish in color and bathed with pus. The lymphatic enlargement had somewhat increased, and the salivary secretion and dysphagia was more marked and troublesome.

The question of an operation is raised. The implication of the lymphatics seems to me to contra-indicate it.

With the five cases heretofore reported the summary of the histories is as follows:

1. All of the seven cases were males.
2. The youngest 45, the oldest 72 years.
3. In four of the cases the growth was from the right side, in one case from the left side, in one case symmetrical and anterior, and in one case probably from the left side.
4. In cases 5 and 6 there was a history of cancer; in case 5 the mother of the patient, and in case 6 a brother.
5. In one case only did the laryngeal disease appear to be secondary.
6. In two cases the lymphatics became involved, and in these two cases there was great tendency to hæmorrhage.
7. In no case was there marked pain in the larynx.
8. In four cases tracheotomy was performed.
9. Four cases should be classed as extrinsic and three cases as intrinsic.
10. The duration of life was: Two cases, 24 months; one case, 21 months; one case, 18 months; one case, 17 months; one case, 14 months; one case not yet determined.

CONCLUSIONS.

1. An intrinsic cancer, localized, with no enlargement of the lymphatics, should be operated upon as soon as its malignant character is determined.
2. An extrinsic cancer with enlargement of the lymphatics should not be operated upon.
3. Intrinsic cancers of the larynx are less likely to infect the system than extrinsic cancers.
4. Intrinsic cancers produce death by interfering with respiration; extrinsic cancers by general infection, but more especially by interfering with nutrition.

Of course there must be many cases of a mixed character. The progress of the disease from within outwards or from without inwards may take place rapidly, and when first seen it will be often impossible to determine the origin except

by the order of the disturbances of function, as of respiration, or of deglutition. If dysphonia or dyspnœa have preceded dysphagia, we may conclude that the disease has been in its beginning intrinsic. If the difficulty of swallowing has been the first or a very early and prominent symptom, the disease has been extrinsic.

SHORT NOTES ON THE SURGICAL DISEASES OF CHILDREN.

Read in the Section of Diseases of Children, at the Fortieth Annual Meeting of the American Medical Association, June, 1889.

BY EDWARD BORCK, A.M., M.D.,
OF ST. LOUIS, MO.

What little I have to communicate upon the surgical diseases of children is based upon personal practical observation. It may not contain any very new information, but as we are all interested, it will add at least something to our collective treasure of knowledge and experience. As such I offer the following remarks, leaving out all theory, criticism and quotations.

I. CONGENITAL.

Hare Lip.—For a single, simple hare lip, after having tried the various methods known, I operate now with the object of not losing or destroying any tissue if possible to prevent it. I insert a very fine needle knife and pierce through the lower margin of one corner of the lip, sweeping the knife around to the opposite corner, thus leaving a complete and continuous bridge between the two parts of the lips. (See Fig. 1; dotted line indicates the incision.) I then pull it down (see Fig. 2), unite the wound with three or four fine cambric needles deeply inserted. Upon the needles a small piece of cork is put upon each side (see Fig. 3), a single figure-of-8 ligature to

FIGURE 1.

FIGURE 2.

hold it in its place: the whole is penciled over with flexible collodion. In youths or adults I use small glass beads instead of cork, two or three on each needle. If swelling should occur I can break one or more beads and thus relieve the tension. I prefer to operate as soon as possible; the earlier the better for the unfortunate creature, and the better the success for the surgeon. The advantage of this plan is that the cork as well as the glass does not irritate the skin, and if any swelling should occur the ligature can be loosened without risk of separating the wound. The cork retracts slowly and enough to correct this swelling. Not dividing the lower margin in twins nor sacrificing any tissue, leaves me a complete natural bridge, a great advantage in cases where union by first intention is not obtained. It also fills up the gap better. The objections that one may raise who never has tried this plan may be

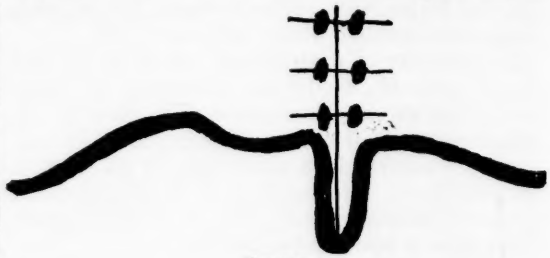

FIGURE 3.

that it leaves a pendulum or a flap hanging down, but if you have patience and wait, that which at first may seem a little unsightly to the eye, will in a few months disappear, so to say, it will be appropriated or absorbed by the surrounding tissue. If, however, there remains a small protrusion, it can easily be removed with the knife to suit the case, and a much better result is obtained. In double, simple harelip, I operate on one side at a time. After a perfect or complete healing of the first, I operate on the second.

In simple, complete harelip running into the nostrils, I operate in a similar way, paring the edges according to circumstances, let the flap hang down and remove the superfluous portions, if any, some time after union has taken place.

Hypertrophy of Tonsils.—I have seen no permanent cure from any treatment whatsoever, except the complete extirpation of the tonsils, which is, to my mind, the only safe treatment. Sometimes a temporary relief may be obtained by other remedies; but generally we find ourselves disappointed. I prefer to take out all of the gland, or as much as possible, either of one or both, as circumstances demand. The slicing off of a small piece only, and depending upon the remaining portion becoming smaller by atrophy, has been to me a disappointment. I have not observed impotency in adults who have had their tonsils removed in childhood. I know a few whose tonsils I removed when they were children; they grew up and were married, and their wives had children, and the offspring had all or most of the "ear-marks" of the tonsilless father; and I know more than one girl whose tonsils I removed that

grew up, married, and became the mother of children.

Phimosis—Circumcision.—The frequency with which one meets with this affection, and its many different degrees, is remarkable; indeed, so remarkable that the question may be asked, what is really considered a perfect, natural prepuce? I would answer, whenever the prepuce is so formed that the opening is sufficient to uncover the gland, or at least the greater part of it. And now I would ask, with how many such formed cases have you met? I have met very few that presented this condition. I observed closely every case when I was engaged in a pretty large obstetrical practice as a general practitioner years ago; admitting, however, that I operated comparatively seldom during that period, and then only in the most urgent cases, letting the greater part remain undisturbed, as many other practitioners have done, and do now. What the beneficial or detrimental result of thus leaving to nature had, in after life, in each and every case, I can not tell; but I do know that in some of the cases which I did not operate on, I had an opportunity to correct, for some cause or another, this deformity during their childhood, or later during their manhood.

To the question, when and how is the operation to be performed, my answer would be, to the first: whenever indicated, and as early as recognized. To the second, operate in such a manner as to accomplish the purpose well for which you operate. Every case stands upon its own merits; no one certain operation, no one certain method, answers in each and every case. Good judgment must be used in each separate case; and the kind of operation or method of operation indicated for each case should be separately selected, for the promiscuous slicing off of a piece of the prepuce, and clumsily done, may produce an evil as great or greater than the one which we aim to correct. I am guided by the following, and operate accordingly: If the prepuce is very small, the prepuce not too long, I make a simple incision with the knife upon the dorsal side, sufficient to uncover the gland completely, and in the majority of such cases a small, or comparatively small, incision will accomplish the object satisfactorily. In cases where the prepuce is extraordinarily long, with either a small or large opening, I prefer circumcision, removing more or less, as the case may require. I use a flat forceps, made out of German silver, which I hand around for your inspection. You will observe that it has a channel which is intended for the knife to pass through. The prepuce is grasped with the forceps and the knife slides through the channel. I use ligatures occasionally and occasionally operate without ligatures, as the case may demand. I take plenty of time, and try with the utmost care to make the operation as neat as possible, and to leave a handsome and nice penis so that the operation may be a credit to the surgeon, the member may be a benefit and comfort to the patient and that others may derive pleasure therefrom. I need not mention all the defects and ailments for which this operation is recommended, as relief or prevention; neither will I speak of the mischief that may be done by an imprudent operation; it would take up too much time. I only wish to call attention to this important observation, that in cases where there is but a small opening in the prepuce and the prepuce is short, the gland is not uncovered or has never been uncovered until maturity, there the gland is always very small and atrophied, the penis is not well developed, is oftentimes very short and then unseemingly so in comparison with the other parts of the body.

I operated upon a young, handsome, well developed married man, the son of a physician, who had congenital phimosis, and who presented the above picture, and who informed me, like many others, that he never could enjoy the act of coitus; that erections were always accompanied with pain, almost to distress. He had no children. Circumcision relieved the gentleman; in time the penis was better developed and his family increased also.

II.—ACQUIRED.

Under the head of fractures and dislocations, I will state that I find the latter as a rule easily reduced, and kept in place; not often followed by unpleasant sequelæ, with the exception of dislocation of the head of the radius, which is the most difficult bone to replace in its proper position, and if success accompanies the attempt, it is as difficult to keep it there. The reasons why are obvious.

I would also call your attention to my method of reducing dislocation of the vertebræ by suspending the patient by the head. (See case reported in *Med. and Surg. Reporter*, Philadelphia, Pennsylvania, January 31, 1885, Vol. 52, No. 5.)

Fractures, I treat in the most simple manner. My observation has been that the more play and freedom you allow the little patient the better the result; that confinement of any kind does not suit children—it produces forced resistance and mischief. For instance, I treat fractures of the femur with a simple, single paste board splint, extending it from the crest of the ilium to below the knee; using a bandage and starch, employing no extension or counter extension; I leave the child alone upon a good mattress. After union has taken place I cut off the lower part of the splint a little above the knee so as to make a short femur splint, and again allow the little creatures the free use of their limbs. I am not afraid they will abuse it.

In fracture of the radius near the carpal joint,

the best result has been obtained by me with the straight splint upon the flexor side, from the elbow to the metacarpo-phalangeal joint, fingers free. After union has taken place, a light paste board splint is applied over the radial side for a short time for safety's sake, and free use of the arm and hand is permitted.

The Epiphyses.—Separation af the epiphyses—I mean hereby fracture—I see much more frequently in late years than formerly, in all shapes and forms, at all stages. Sometimes directly after the injury has occurred; at other times weeks, months, and years afterwards. My observation has taught me that separation of the epiphyses of the humerus and femur are the most frequent, and no matter at what time the injury is recognized, or how carefully it is treated, the results are never very satisfactory. The separated epiphysis is partly or completely absorbed and therefore has only partial or no union at all, and the limb will have a dangling motion, though time may improve the usefulness of the limb, but the patient never recovers as well as after a fracture in other parts of the bone.

Hip Disease.—In the second stage of hip disease—that is the stage of effusion, we have among other symptoms, great pain. If the case goes from bad to worse—that is from the second to the third stage, suppuration takes place, and as soon as the capsule is perforated the pain ceases. I have therefore been led in several cases, to open the capsule by a subcutaneous incision during the second stage, with the most gratifying results. By this means I let the fluid run into the surrounding tissues to be absorbed by nature. The pain ceases immediately, the patient is then put in as comfortable a position as possible; the limb is easily straightened by manipulation. The best method that I have employed is to put the patient upon a pair of wire breeches. No forced extension is employed. I will say that aspiration as a curative method has failed in my hands.

Extension and Counter-Extension, employed upon the fanciful theory that thereby the head of the femur is separated from the acetabulum is useless. In a healthy joint it cannot be done. The two surfaces are in such close relation—move upon one another so accurately, that there is no room; the vacuum is small indeed and the joint hermetically sealed, therefore it can not be pulled asunder. Separation of these two surfaces can only take place when disease has destroyed the ligaments and the capsule is opened.

Club-Foot.—I do not think that we surgeons up to the present time have accomplished all that might be accomplished for the successful treatment of club-foot, notwithstanding all the modern improvements for the treatment and cure of the various kinds of club-foot. There is not a single method ever so much praised, that will answer for all cases belonging to one or the other class of club-foot. There is no apparatus that will answer for all cases. Each case requires a careful study and though several cases may present the same features, each separate picture may be produced by a different cause, consequently the treatment applied to one case may not answer for the other. Has not every surgeon seen cases of club-foot successfully treated by one or another method, and has not every surgeon seen the same case so successfully treated by him fall into a relapse again after a time? Most certainly. Then what is the cause of these relapses? Has the fault been with our diagnosis or with our treatment? That is the question to be answered. Now it may be with one or the other or it may be both; or there may be something else, which as yet we do not know, but certain it is that these relapses do occur over and over again, and more often than we are willing to admit. I think that success greatly depends on the diagnosis—a careful diagnosis between the physiological club-foot and congenital pathological club-foot of the infant is of the utmost importance, the first of which, according to my observation, every infant possess in a greater or less degree, and which is always corrected as soon as the child begins to walk, and these are the cases that the child will outgrow. Now if the apparent deformity of the physiological club-foot is subjected to the treatment of a congenital pathological club-foot, then surely there will be some mischief produced; and a permanent deformity will remain in the future, for when the child begins to walk, then the deformity will be increased and it has to be corrected over again. Again, if a congenital pathological club-foot is looked upon as a natural physiological position of the foot and left to itself to outgrow, we will be sadly disappointed again, for the deformity, if not corrected early, will increase rapidly and fearfully as soon as the child begins to use its feet in walking. It is more difficult then to correct the same; the more advanced the case, the more severe treatment it takes. If no treatment is instituted the case grows worse and worse until at last no kind of treatment will correct the error. A correct diagnosis and as early a treatment as possible is essential for success. Different forms of treatment are required for the different forms of congenital or acquired club-foot. For example, to try to cure a club-foot or genu valgus, which was caused by congenital paralysis, by complicated mechanical appliances would be in vain; and it would be useless to attempt to correct such a deformity by the operation of tenotomy, osteotomy and so forth; it would not alone be a failure, but a discredit to the surgeon. I pursue no one method for all cases. I adapt my treatment to each individual case and am well satisfied with the general results I have obtained.

Tracheotomy.—This operation is an unthankful one. Out of eight cases during this year, I have lost seven; one of them died upon the table. It was a child only eight years old, the only daughter, a handsome bright child. All these cases I saw in the last stages of diphtheria or membranous croup, being called merely to perform the operation as a *dernier ressort.* The remaining cases all lived from two to twenty-four hours. They have occupied my mind and I have asked myself the question: What can be the cause of all these fatal terminations? consoling myself at the same time that others have had no better luck. In my seven cases chloroform was administered and the operation done at night by gas or kerosene light. All care was taken by myself and the neccessary attention bestowed at the time and in the after treatment by the watchfulness of the attending family physicians. Now whether the chloroform, or possibly the mixture of the gas or kerosene with the chloroform may have been a factor in these cases I can not determine; but it occupies my mind at present for solution. The eighth case, a child four years old, suffered with membranous croup, the dyspnœa was very great, the patient was almost cyanosed. I operated without chloroform and quickly, on a bright day. This child recovered after careful treatment and attention by the family physician. About twelve years ago, during a season, I performed ten tracheotomies with five recoveries. It has not and may never again repeat itself. Tracheotomy for the removal of foreign bodies hardly ever terminates fatally.

Diseases and Injuries of the Spine, are very interesting studies, and under that head I will only say a few words about what is known as Pott's disease. The principles of the treatment of the trouble, though important, is very well understood, but of the pathology of this affection I think we can still learn a good deal by more close investigation. The question is what is the general cause; this seems even at the present day not quite settled; the opinions are various and a few cannot give up the old inherited theory of scrofulous diathesis. My observation, studies and investigation have taught me that in by far the majority of cases the cause of caries of the spine has been produced by mechanical injury. So with diseases of the joints such as abscesses, etc. The tubercular origin of such has not been and can not be satisfactorily proven; it is only a convenient theory.

Mr. President, there are other interesting topics such as congenital tumors, hernia, spina bifida, etc., but I have already taken my allotted time. One could write a good sized monograph upon every single affection. The points which I have touched upon in this paper were brought forward for the purpose of eliciting discussion upon this interesting field of surgical diseases of children and thereby obtain the views and opinions of others in order that we might listen to the personal observations of the many distinguished gentlemen here present. I should like to have said a few words about laparotomy in children, but will reserve it for another occasion. I thank you for your attention.

STATISTICS OF CONSTITUTIONAL AND DEVELOPMENTAL IRREGULARITIES OF THE JAWS AND TEETH OF NORMAL, IDIOTIC, DEAF AND DUMB, BLIND, AND INSANE PERSONS.

Read in the Section of Oral and Dental Surgery, at the Fortieth Annnual Meeting of the American Medical Association, June, 1889.

BY EUGENE S. TALBOT, M.D., D.D.S.,

PROFESSOR OF DENTAL SURGERY IN THE WOMAN'S MEDICAL COLLEGE; LECTURER ON DENTAL PATHOLOGY AND SURGERY IN RUSH MEDICAL COLLEGE, CHICAGO.

In some papers read before the Odontological Society of Great Britain from 1864 to 1872, the general opinion was expressed that certain marked forms of irregularities of the jaws and teeth prevailed largely among the feeble-minded, and that when found in children they constituted a marked symptom of a low order of mental development. In May, 1864, Mr. Cartright, in a paper entitled "Reflections on the Cause and Treatment of Some Forms of Irregularities," said that irregularity of the teeth "is the result of high and selective breeding." This opinion I have already discussed in a paper read before the Indiana State Dental Society on June 26, 1888, on "Arrest of Development of the Maxillary Bones due to Race-crossing, Climate, and Soil," which was published in *The Dental Cosmos.*

In June, 1864, Mr. Thomas Ballard read a paper before the Odontological Society on "The Constitutional Ill-effects of Fruitless Sucking, and the Diagnostic Value of Deformed Jaws in Relation thereto," in which he claimed that thousands of children die annually of diseases primarily due to fruitless sucking; "but many of the sufferers escape death, and they constitute a class of defective individuals with which all classes of society abound. The worst form is the idiot, and in this class there are many degrees." Again he says: "I hold that the deformities to which I refer," but which he does not mention specifically, "are produced solely by the retained habits of sucking; and it is the children who have been exposed to fruitless sucking and consequent persistent diarrhœa, with its attendant evils, when infants, who acquire the retained habits of sucking, and thus get their jaws deformed. And as in idiots are seen the worst forms of defective growth, so also do they exhibit the most aggravated forms of deformed jaws and teeth, the habits of sucking being

retained by them to an advanced age. . . . . So also are the deformed jaws and teeth commonly to be observed among the ill-grown, phthisical, and the weak and delicate members of society. The normal jaw, with well-set and perfect incisor teeth, is the principal characteristic feature of an individual possessing a sound constitution." I shall show subsequently in this paper that it is not true that idiots present the most aggravated forms of deformed jaws and teeth.

In his work on "Deformities of the Mouth" Mr. Oakley Coles attributes intermaxillary prognathism to a force operating on the intermaxillary bone, such force originating in the body of the sphenoid, and being transmitted by the intervening nasal septum. By *force* he means a direction of growth in a given line, of such energy as to overcome the resistance offered to it by surrounding structures. In regard to the sphenoid bone he says: "It may be urged that too much importance is attached to the influence of the sphenoid, but it must be borne in mind that this bone continues to grow up to about 25 years of age. This will in part explain the fact of deformities of the upper jaw appearing after the eruption and shedding of the temporary teeth, and becoming intensified towards adult life." Arguing back from the development of cases of double hare-lip to premaxillary prognathism, he thinks that we can come to no other conclusion "than that the duration and extent of the force operating upon the intermaxillary bone determines the nature and extent of the deformity that will be produced." He sees the natural objection to this view, that as the prognathism is not pronounced in early life, and as the union of the intermaxillary bones with the true maxillary bones is complete at this time, it is impossible that the intermaxillary bone can be the subject of any subsequent change. But, having shown that "intermaxillary prognathism is but a preliminary step in the deterioration of the form that will produce in a subsequent generation (subjected to like conditions of propagation) double hare-lip," he assumes that the general cranial development will in the two cases bear some relation to each other; and as Hutchinson has shown that in cleft palate cases ossification of the sutures is delayed to a period far beyond the usual date, so in cases of intermaxillary prognathism the sutures would not be so much ossified as to oppose any sufficient resistance to the exercise of the force originating in the sphenoid. He then goes on to say that many cases of prognathism are associated with such central lesions as will manifest themselves in the form of idiocy or imbecility, and distinctly asserts that such a deformity as prognathism occurring amongst the highly civilized is a distinct mark of deterioration of stock. "After carefully examining the works of various writers on the subject of microcephalic idiocy," he says, "there seems sufficient evidence to justify the belief that premature ossification of the sutures is the rule in the majority of these cases; and we may, therefore, assume, if we cannot absolutely conclude, that this influence operates powerfully in the production of the dental deformity known as the lambdoid jaw;" a view held by Virchow, but combated by Ireland and Langdon Down.

Dr. Louis Ottofy, in his paper on "The Incipiency of Dental Caries," read before the joint meeting of the American and Southern Dental Associations at Louisville, on August 30, 1888, reported an examination of the mouths of 623 children—317 males and 306 females. These children were pupils in the public schools at Grand Forks, Dak., Lebanon, Ill., and Chicago. The following table shows the percentage of irregularities:

Age.	Irregular.	Regular.
5	0 per cent.	100 per cent.
6	9 "	91 "
7	27.5 "	72.5 "
8	43 "	57 "
9	14 "	86 "
10	31.5 "	68.5 "
11	32.5 "	67.5 "
12	25 "	75 "
13	20 "	80 "
14	35 "	65 "
15	28 "	72 "

It will be seen that the largest percentage of irregularities is at the age of 8 years. The cuspid teeth are appearing at this time, and at least one-half of the irregularities are due to local causes. At the age of 13 but 20 per cent. of the cases showed deformities; nature and a judicious use of the forceps had corrected many of them. At the age of 15, 28 per cent. of the teeth were irregular. I venture the opinion that if these examinations could have been extended to the age of 20 years, the percentage of irregularities would have diminished. The development of the jaws at this age would allow nature to reduce many of these abnormal conditions.

The following table shows examinations of mouths of 1000 children over 12 years of age, made by myself:

TOTAL DEFORMITIES IN THE JAWS OF HEALTHY INDIVIDUALS OVER 12 YEARS OF AGE.

No.	Sex.	Normal.	Large Jaw.	Protrusion lower jaw.	Protrusion upper jaw.	High Arch.	V-shaped Arch.	Partial V-shaped Arch.	Thumb Sucking.	Saddle-Shaped Arch.	Small Teeth.
396	M.	313	11	3	5	26	5	18		12	13
604	F.	467	8	4	2	30	5	43		21	17
1000	Total	780	19	7	7	56	11	61		33	30
Per cent.		78	1.9	.7	.7	5.6	1.1	6.1		3.3	3.0

The difference between Dr. Ottofy's percentages and those shown in the above table is accounted for by the fact that in his table both local and constitutional causes are included, while in mine the many deformities due to local causes are excluded.

Nearly all of these cases were residents of Chicago, and had been attended by the dentist regularly. These irregularities, therefore, might be classed as constitutional or developmental, as they could not be prevented by the dentist by the use of the forceps. We naturally suppose that the majority of the children examined by Dr. Ottofy, living in the country as they did, had received but little attention from the dentist—which would account for more cases being irregular than among those examined by me. It is possible also that some of those I examined had had slight irregularities corrected while they were young, thus preventing serious complications when maturity was reached. I should expect to find quite a difference in the percentage of irregularities in different parts of the country. When people are confined indoors, and do brain work chiefly, as those living in cities, they are likely to have more irregularities than country people. So also among those living in old parts of the country, as the New Englanders, rather than in residents of a newer part of the country.

The Jaws of Idiots.—Dr. W. W. Ireland has defined idiocy as "Mental deficiency or extreme stupidity depending upon malnutrition or disease of the nerve centres occurring before birth or before the evolution of the mental faculties in childhood." A definition that seems more inclusive, and that more clearly describes the tissues of the body, is the one given by Dr. Shuttleworth: "A vice of the entire organism; an affection not only of the nervous system but of the functions generally of organic life." Not a tissue of the body is exempt; the phenomena that check development of the brain tissue will also interfere with proper development of the other tissues of the body.

No part of the body has received the impress of disease so markedly as the osseous system, and yet pathologists have given this part of the idiotic system but little attention. The osseous system seems to have been constructed regardless of symmetry or uniformity. While in the normal individual the lateral halves are never uniform, in the feeble-minded the greatest asymmetry prevails. This want of harmony is more apparent in the maxillary bones because of their peculiar formation and environment. The close proximity of the jaws and their articulations permits of irregularities being readily observed. At the beginning of my examination I observed that other deformities than the V- and saddle-shaped existed, all of which must be considered. I found both excessive and arrested development of the maxillary bones, arrest of the one and excessive development of the other, protrusion of the upper or lower jaw, high and low vault, partial V and partial saddle-shaped arches, semi-V and semi-saddle-shaped arches, semi-V and semi-saddle-shaped on the same side, and small teeth.

Of late years some American investigators had made examinations among the inmates of our institutions for idiots, and reported that they found about the same proportion of irregularities as may be seen in ordinary practice. The varying opinions among scientific men on either side of the Atlantic led me to investigate the subject carefully. The examinations were made by myself and able dentists in the following named institutions:

Asylum for Idiots of the State of New York, at Syracuse; Massachusetts School for Feeble-minded, at South Boston; Illinois Asylum for Feeble-minded Children, at Lincoln; Asylum for Idiots, Randall's Island, N. Y.; Minnesota Training School for Idiots and Imbeciles, Faribault; Kansas State Asylum for Idiots and Imbeciles, South Winfield; Cook County Insane Asylum, Dunning, Ill.; Pennsylvania Institute for Feeble-minded Children, at Elwyn.[1]

The following tables show the total number of irregularities in each grade and sex:

TOTAL DEFORMITIES IN THE JAWS IN ALL GRADES.

HIGH GRADE.

No.	Sex.	Normal.	Large jaw.	Protrusion lower jaw.	Protrusion upper jaw.	High Arch.	V-Shaped Arch.	Partial V-shaped Arch.	Thumb Sucking.	Saddle-Shaped Arch.	Small Teeth.
334	M.	190	33	10	36	84	16	44	2	51	16
228	F.	132	14	14	17	57	15	12	5	23	14
562	Total	322	47	24	53	141	31	56	7	74	30
Per cent.		57.2	8 3	4.2	9.4	25	5.5	9.9	1.2	13.1	5.3

MIDDLE GRADE.

434	M.	261	34	19	22	41	25	45	1	33	11
316	F.	195	17	9	18	26	16	46	5	24	12
750	Total	456	51	28	40	67	41	91	6	57	23
Per cent.		60.8	6.8	3.7	5.3	8.9	5.4	10.8	8	7.6	3

LOW GRADE.

271	M.	97	37	23	32	55	33	39	7	37	9
394	F.	220	27	17	34	56	24	50	11	39	9
665	Total	317	64	40	66	111	57	89	18	76	18
Per cent.		47.6	9.6	6	9.9	16.6	8.5	13.3	2.7	11.4	2.7

TOTAL DEFORMITIES IN THE JAWS.

1977		1095	152	92	159	318	129	236	31	207	71
Per cent.		55.3	7.6	4.6	7.9	16	6.5	11.9	1.5	10.4	3.5

The above tables show that almost one-half of the whole number examined had irregularities of the jaws and teeth. The examined were children over 9 years of age. Under that age irregularities might be considered as of local origin, while constitutional and developmental irregularities do not appear until the eruption of the incisors and first permanent molars. As would be expected, the largest percentage of irregularities is found in the low-grade class; and it is seen that the normal class in the high and middle grades vary only about 12 per cent., the middle grade showing the largest percentage of normal jaws

[1] Special reports may be found in the Transactions of the International Medical Congress, 1887, and in the Annual, 1888.

and teeth, the high grade the next, and the low grade the fewest number of normal cases.

The mental capacity of the idiot can indicate in a general way only the abnormal condition of the osseous as well as muscular, venous and arterial systems of the individual; thus, a high-grade idiot might possess an atrophied condition of any of the tissues of the body, while a low-grade idiot might develop any or all of the tissues to an excessive degree, this depending of course upon the inclination and condition of the blood supply. Thus the arterial and nervous systems might be atrophied on one side, lessening the supply of blood to that side or limb, producing atrophy of the muscular and osseous tissues on that side. The opposite effect might be produced on the other side; a large amount of blood would be carried, naturally, to the extremities of the other side, causing hypertrophy of tissue.

If the tissues of the body are so prone to take on abnormal conditions, certainly the jaws must suffer more or less. I have observed three conditions that account for nearly all the irregularities of the jaws and teeth: excessive development, arrest of development, and inharmonious development of the maxillary bones. These abnormalities are developed with the osseous system, and may be properly termed constitutional and developmental.

When excessive development occurs in one jaw and the other is normal, or arrested development ensues, then the teeth in the abnormally large jaw protrude.

If the cranium is large the superior maxilla is usually larger than normal. When the inferior maxilla is involved the rami are as likely to be enlarged as the body of the bone. Sometimes the rami and body develops uniformly. When there is excessive development of a part of all of the bone, protrusion of the lower jaw and teeth takes place. I have seen cases in which one-half of the superior and inferior maxilla, as well as one-half of the cranium was larger than the other.

In these irregularities of the jaws, however, irregularities of each set of teeth are seldom seen. While it is proper to speak of these conditions as irregularities, yet they are so only as one jaw is related to the other.

I have already shown, in a paper read before the Dental Section of the American Medical Association in 1888, that irregularities of the teeth, which I have termed constitutional, prevail to a greater extent among the idiotic, deaf and dumb, and blind than among an equal number of strong and well-developed persons; that not only is the brain matter deficient in the feeble-minded, but that many cases are seen that show that the osseous system is generally defective; and that when the bone tissue is arrested in development from malnutrition, the maxillary bones are affected.

It is frequently the case that when idiocy appears in a family, other members of the family are observed to be scrofulous, deaf, dumb, blind, or insane, showing that the conditions indicating neurotic tendencies have been transmitted through generations. In his work on "Insanity in Norway," Ludwig Dahl gives many instances in which the result of this tendency is deafness, dumbness, or insanity, as often as idiocy. He says: "Acquired insanity and idiocy frequently appear side by side in the same family stock. Deaf-dumbness occurs frequently." He has traced the genealogies of a number of families, and has brought to light a number of interesting facts. In his genealogy of No. 3, the Ejvinds family have nine insane or idiotic, four deaf and dumb, and one epileptic. Other families showed a similar proportion of mentally and physically deformed persons.

In his work on "Idiocy and Imbecility," p. 528, Dr. Ireland says: "Deafness frequently occurs in families where some of the other members are idiots." And again, on page 16: "The children of epiletics are frequently insane or idiotic or hysterical, and the descendants of an insane person are often epileptic, idiotic or insane. Deaf-dumbness, chorea, locomotor ataxia, hysteria, and other disorders of the nervous system now and then occur in the descendants apparently as the result of an inherent neurotic tendency in the family."

In the report of the Commissioner on Idiocy appointed by the Legislature of Connecticut,[1] it was found that out of seventy cases of idiocy there were ten cases of idiotic parents, six insane parents, six insane relatives, eight epileptic parents or relatives, eight blind and two melancholic.

Dr. Howe shows[2] that in seventeen families in Massachusetts, the heads of which were blood relations, there were born ninety-five children, of which forty-four were idiotic, twelve scrofulous and puny, one deaf and one a dwarf. Morel and the school of investigation which he founded point out that the defective classes, *i. e.*, the congenital deaf mute, blind, lunatic, idiotic, criminals and paupers, are buds on the same tree of human degeneracy. In dealing with the evidences of degeneracy they cite defective teeth as one of the signs in most instances. These signs are ativism or reversion to lower types of structure and junctions. Many more cases could be given showing that a relation exists between the deaf, dumb, blind and insane, but it is evident that the offspring of parents showing neurotic tendencies and symptoms are subject to these conditions. Medical men have commonly classified these lesions under the same head; and some

[1] See Report of Commissioners on Idiocy to the General Assembly of Connecticut, New Haven, 1856, p. 35.
[2] On the Causes of Idiocy, Edinburgh, 1858, p. 35.

specialists go so far as to classify the criminal and drunkard in this category.[1] I have recently read an article from a French journal in which a left-handed person was also included.

While specialists have generally concluded that most of these conditions are derived from a common neurotic ancestry, the only common feature is a very low grade of cerebral development. In my investigations concerning the osseous system in its relations to the irregularities of the jaws and teeth, I have observed a lesion common to all these conditions. With this object in view I have made examinations of the mouths of all these classes except the criminal, and these I hope to examine in the near future. I found great difficulty in enlisting sufficient interest on the part of superintendents of Blind Asylums to enable me to make proper examinations of the blind, their reason being that the sensitive nature of the parents would not permit of their exhibiting the mouth for examination. I have made a sufficient number of examinations, however, to make some estimate of the percentage of deformities of the jaws and teeth.

Deaf and Dumb.—The greatest interest has been shown by the superintendents of deaf and dumb institutions, thus enabling me to make very satisfactory examinations. In some of the institutions visited the blind are retained with the deaf and dumb; when such was the case the blind were classed with the deaf and dumb. Examinations were made in the following named institutions; either by myself or by able dentists living in the town or city where the institution was located:

Minnesota School for the Deaf, Faribault; Portland School for the Deaf, Portland, Me.; Oregon School for Deaf Mutes, Salem; Colorado Deaf and Mute Institution, Colorado Springs; New Jersey School for Deaf Mutes, Trenton; South Carolina Institution for the Education of the Deaf, Dumb, and Blind, Clear Springs, S. Ca.; Milwaukee Day School for the Deaf, Milwaukee, Wis.; Washington School for Defective Youth, Vancouver, Washington Terr.; Arkansas Deaf Mute Institution, Little Rock; Iowa Institute for Deaf and Dumb, Council Bluffs; Clark Institute for Deaf Mutes, Northampton, Mass.; Evansville Deaf Mute School, Evansville, Ind.; Institute for the Deaf, Dumb, and Blind, Berkeley, Col.; Kansas Institute for the Deaf and Dumb, Olathe, Kans.; Institute for the Deaf and Dumb, Austin, Texas; Nebraska Institute for the Deaf and Dumb, Omaha; Alabama Institute for the Deaf and Blind, Talledega; Indiana Institute for the Deaf and Dumb, Indianapolis; Western Pennsylvania Institute for the Deaf and Dumb, Pittsburg; Northern N. Y. Institute for Deaf Mutes, Malone, N. Y.

[1] Lombroso has called attention to deformities of the jaws among the born criminals.

The following table shows the results of the examinations of the Deaf and Dumb:

TOTAL DEFORMITIES IN THE JAWS OF THE DEAF AND DUMB.

No.	Sex.	Normal.	Large jaw.	Protrusion lower jaw.	Protrusion upper jaw.	High Arch.	V-shaped Arch.	Partial V-shaped Arch.	Saddle-shaped Arch.	Small Teeth.	Cleft Palate.
1111	M.	538	197	41	116	241	91	115	108	51	
824	F.	363	108	51	89	177	78	77	95	62	
1935	Total	901	305	92	205	418	169	192	203	113	2
Per cent.		46.5	15.6	4.7	10.5	21.7	8.7	9.9	10.4	5.8	

Examinations were made in the following named institutions for the blind: Institute for the Blind, New York City; Maryland School for the Blind, Baltimore; Maryland School for the Blind and Deaf and Dumb, Baltimore; Kentucky Institute for the Blind, Louisville.

The results of the examinations of the blind are shown in the following tables:

TOTAL DEFORMITIES IN THE JAWS OF THE BLIND.

No.	Sex.	Normal.	Large jaw.	Protrusion lower jaw.	Protrusion upper jaw.	High Arch.	V-shaped Arch.	Partial V-shaped Arch.	Saddle-shaped Arch.	Small Teeth.	Cleft Palate.
107	M.	53	8	9	10	20	4	3	6	7	
100	F.	52	8	7	5	18	3	6	5	3	1
207	Total	105	16	16	15	38	7	9	11	10	1
Per cent.		50.7	7.7	7.7	7.2	18.3	3.3	4.3	5.3	4.8	

In the following table are shown the results of the examinations of the mouths of the insane.

TOTAL DEFORMITIES IN THE JAWS OF THE INSANE.

No.	Sex.	Normal.	Large jaw.	Protrusion lower jaw.	Protrusion upper jaw.	High Arch.	V-shaped Arch.	Partial V-shaped Arch.	Saddle-shaped Arch.	Small Teeth.
430	M.	394	10	4	2	18	12	29	3	5
270	F.	226	8	6	4	26	14	18	9	2
700	Total	620	18	10	6	44	26	47	12	7

Examinations of the mouths of 700 insane patients at the Cook County, Ill., Insane Asylum, and the Illinois State Insane Asylum, as shown in the table, revealed the fact that only about 12 per cent. were irregular, the irregularities consisting of protrusion of the upper and lower jaws, partial V, and very few saddle-shaped arches. The high arch was quite conspicuous among these people. Some of these irregularities were due to local causes. These irregularities were among cases of congenitally insane patients, or patients that had become insane early in life. These observations were not confined to the hereditary types.

With few exceptions insanity does not appear in the individual until the skeleton has attained its normal development. There were irregularities of the teeth produced by local causes. It is probable that a large percentage of constitutional

irregularities of the teeth could be found in the mouths of inmates of our private asylums, where there are more hereditary cases. It has been suggested by Dr. Coles that high vaults and cleft palates are associated. It is doubtful if this can be proven. Out of 1,977 idiots 318 had high vaults and but one case of cleft palate. Among 2,142 deaf, dumb, or blind persons, there were 255 high vaults, and only three cases of cleft palate. This small percentage would indicate that this lesion is not inherited nor developed with the osseous system, but is merely an accident, and local in its origin.

The high arch or vault, observed among idiots, and also observed, though perhaps not so frequently, among normal persons, cannot be considered a deformity or irregularity of the jaw, although where present it furthers the production of irregularities of the teeth. This peculiar formation of the roof of the mouth was seen closely allied with the V and saddle-shaped arches, and many that have given thought to this subject, especially Dr. Ballard, believed it a part of the deformity, and that it was produced by the pressure of the thumb or finger in the roof of the month. I have examined a number of children while sucking the thumb or finger, and have never found that they reached the roof of the mouth. If it were possible for the high arch in the anterior part of the mouth to be produced by pressure of the thumb or finger, how can we account for the high arch in the posterior part of the mouth when the position is such that the thumb or fore-finger cannot reach it without considerable exertion? Some of the arches are higher at the median line, others at either side of the median line, while still others are high, broad or flat, showing that they could not be produced by sucking a foreign substance.

I venture the opinion that the high arch is a natural development of contour in harmony with the other bones of the face. It is produced in connection with the eruption of the second teeth, and with the development of the facial bones, by the elevation of the vault on the one hand, and the elongation of the alveolar process on the other. This is seen generally in connection with long thin faces, and long thin jaws, necks and limbs. It is connected with the typical shape of the American face, and is not so often seen in foreigners.

Irregularities of the jaws and teeth, as the V- or saddle-shaped jaws, are not confined to the high vault; they are frequently seen in connection with the medium or low vault. The high vault, as has been mentioned, aids the production of irregularities. The alveolar processes are thin and long, affording feeble resistance to the pressure of the teeth, as they force their way into the arch. The thin alveolar process gives way and either the V- or saddle-shaped jaws are produced.

The percentage of small and large teeth is small. The teeth, unlike the other tissues of the body, develop from the periphery, their development beginning as early as the sixth week of intra-uterine life. Calcification sets in immediately, and the shape and size of the teeth are determined while the surrounding tissues are yet soft. The calcific material, which is first deposited on the outer surface, protects the inner part of the tooth-structure, and unless some constitutional disturbance like eruptive fevers, or an inherited diathesis, impair nutrition, the teeth will develop normally. Generally speaking, the teeth are of the same size to-day that they have been for ages. When teeth are usually large or small they may be accounted for as an inheritance.

I have described the condition of the jaws and teeth that are not intimately connected with the three general pathological and physiological abnormalities of the jaws already mentioned, viz., excessive development, arrest of development and inharmonious development of the bone tissue. The feeble-minded patient affords ample opportunity for the study of these abnormal conditions and of bone tissue. The text books describe these conditions but meagerly, and the profession generally speak of all enlargement of tissue as hypertrophy, and of all tissue not strictly up to normal as atrophied. The different causes of these conditions are not sought after, nor are they well understood.

When excessive development of the jaws exists, the circle of the jaw is larger than the arch of the teeth. The teeth are seldom irregular under these conditions. This inharmonious development prevents the proper articulation of jaws. Excessive and inharmonious development are seen less frequently than arrested development. This[4] is due to lesions of the nerve centres, and constitutional diseases such as syphilus, scrofula, rickets, race crossing, climate and soil, and early extraction of the teeth. The result of arrested development of the jaw is the arch of the jaw is smaller than the arch of the teeth, and consequently the teeth are irregular. The principal types being the V and saddle and kindred shaped arches. The above statistics indicate that irregularities of the teeth follow neurotic lesions, as a natural result.

Any disturbance of the function of nutrition naturally affects the osseous system. Kingsley and others, including myself, have seen that some of the lower grade of idiots, deaf dumb or blind, possess well developed jaws and teeth. It is a fact admitted by all pathologists that under certain environments the tissues of the body develop abnormally. This occurs in the osseous system. This being the case large jaws and regular teeth are sometimes seen.

[4] See Dental Cosmos, 1888 and 1889.

BATHING AND BOATING ACCIDENTS.

Read in the Section of State Medicine at the Fortieth Annual Meeting of the American Medical Association, June, 1889.

BY IRVING C. ROSSE, A.M., M.D.,
OF WASHINGTON, D. C.
PROFESSOR OF NERVOUS DISEASES, GEORGETOWN UNIVERSITY.

I am not sure that I could have selected a more appropriate time and place to bring to the notice of the profession some of the accidents that occur in bathing and boating. Even here in lovely Newport, where I have spent many happy days, sad cases of drowning occur every season, and it is safe to say that most of them arise from inexperience in swimming and are consequently preventable. As a physician and practical athlete, I may show more than ordinary enthusiasm in making a plea for the educational, hygienic and curative advantages of an exercise that I have practiced at many different places over the world from the tropics to the Arctic Ocean, and in such places as mountain lakes, the mid-Atlantic, and even in a volcanic crater some 2,000 feet deep.

The frequent accounts of drowning that one reads constantly in the daily papers at this season, aside from those occurring in the late floods, instead of dampening rather rekindle an ardor to which is added a tinge of regret consequent upon the reflection that most of these accidents arise from inability to swim; for with only a moderate knowledge of this easily acquired art, many lives may be saved and much bereavement prevented. Philanthropic motives, if no other, would therefore prompt one to give the matter more than passing notice. In view of the surprising great number of deaths from drowning, it is lamentable in this practical age that the useful art of swimming takes such small part in the training of youth. Young minds are crammed with all sorts of useless information to the neglect of what is essential to the preservation of personal health and the saving of life. Legislators vote large sums of money for doubtful jobs, yet refuse to countenance the establishment of swimming baths in our cities. The police regulations of most of our large towns, conceived in the interests of extreme prudery, virtually tend to make swimming one of the lost arts. Those of the District of Columbia, for instance, were evidently framed in the same spirit of protest which caused a former Governor of Maryland to object to midshipmen swimming from a certain wharf in the Naval Academy because the ladies could see them with their opera glasses.

That people do not fully realize the importance of swimming is a trite observation, but a truth none the worse for frequent repetition, and allowing it to lie fallow will never bring about the desired reformation. Long personal experience with swimming so convinces me of its usefulness that, if it came to a choice between knowing the higher mathematics or how to swim, I should choose the latter every time. At many of the larger schools in England lads are obliged to pass in swimming before they are allowed to go out in boats. This rule, established at Eton in 1840, has been effectual there in the prevention of drowning, only one case having occurred since that time, although the swamping of boats has been frequent. A yearly average of 150 boys learn to swim and pass the test. It is, of course, possible to enforce such a rule in schools and among bodies of individuals where discipline obtains, yet this manly and invigorating accomplishment is neglected both in educational establishments and in the Army. Swimming is taught at our Naval Academy, but at West Point it is not, and most of the cadets are lamentably deficient in this respect. The statistical exhibits of our late war show the strongest reason why a soldier should know how to swim. The aggregation of killed in action is shown to be 67,058, while there were drowned 106 officers and 4,838 men. The small regular Army lost 5 officers and 89 men from this cause; the U. S. colored troops 6 officers and 289 men; and the volunteers furnished a large contingent, the State of Ohio alone having lost 14 officers and 770 men from drowning. Just think of a number amounting to five regiments perishing from an easily preventable cause—for the majority of these men were drowned in such circumstances as fording a stream, crossing narrow rivers, or by the upsetting of small boats when a few strokes would have sufficed to save life.

But the best swimmers are often drowned, say the cynical wiseacres. True, a good swimmer sometimes meets with that misfortune, but the occurrence is so rare that for that very reason a vivid effect is produced on the imagination and memory of unthinking persons who, accustomed to make *post hoc* conclusions, never for a moment consider the greater number who are saved by knowing how to swim.

Among other prevailing and groundless objections to swimming are the production of colds, the danger of heart failure and the risk of being bitten by sharks. As to colds and the effects of the cold immersion in the water, I should say that the danger therefrom is greatly exaggerated, if my own experience is any guide, for I have never had a cold from swimming in icy water, even under the Arctic Circle. On the contrary, one of the severest colds I ever had was contracted in Washington some years since with the thermometer high in the nineties, which necessitated a visit to the seashore, where after two swims the cold disappeared as if by magic.

There are, of course, many weak people whose chest organs are in such condition that they should not venture to swim; but I am convinced that the neglect to learn swimming in childhood and the absence of this eminently hygienic exercise are responsible for many flabby hearts, weak lungs and torpid minds.

In addition to being generally tonic and bracing, the effect of swimming considered in itself is to develop the muscular system and to exert a favorable influence on the great bodily functions, as the digestion, nutrition, respiration, circulation and innervation. No other exercise with which I am familiar gets the heart and lungs in better working order, and none is better for getting one in what sporting men call "condition." After two weeks' daily swim in salt water I have run a measured mile on a beach with very little more embarrassment to circulation and respiration than if I had walked the same distance.

Aside from the physical, another advantage of a high order accrues in the way of happy moral influence. Boxing, sword-play and several other manly pastimes will do much to develop courage, prudence and cleverness; but the cold-blooded quiet and presence of mind which aid us to avoid danger or to conquer it, or to lend ourselves to an act of devotion, are best cultivated by the exercise of swimming. What, for instance, is a more brilliant and commendable act of devotion than that of a dauntless swimmer who, regardless of self, plunges overboard at the risk of his own life to save a fellow-being from drowning?

As a curative means, swimming also comes in for praise. In this respect it is superior in many conditions to the so-called "tent cure," to massage, electricity, or drugs, and may be employed with benefit in scrofula, chlorosis, convalescence, insomnia and many other nervous diseases, as chorea and hysteria. The latter malady especially, I have known to be cured after a course in the swimming baths of Alameda, Cal.; and my experience as a neurologist leads me to recommend swimming as one of the best adjuvants in the treatment of nervous diseases.

The danger to be apprehended from sharks is more a figment of the mind than a reality. I have no personal knowledge of shark bites, although I have done much swimming in such infested places as the Gulf of Mexico, the harbor of Cadiz, the Azore Islands, Bermuda, Tybee, the mid-Atlantic and other places where these voracious animals are reputed to gobble up such small bait as a man at a single mouthful. For years I have made it a point to question sailors and fishermen in various parts of the world as to their actual and personal knowledge of shark bites, and though the inquiry has called forth some remarkable fish stories, I have met but two people with any personal knowledge of the matter. Admiral Porter tells me of an instance in which he saw a man attacked; the other person, a pilot at Bermuda, knew of a man that had his hand bitten by a shark just as he was pulling in a hooked fish from the water into his boat. Sharks often collect around the carcass of a whale while it is being "cut in," and men sometimes slip overboard among them, yet after a long residence in New Bedford and a somewhat extended experience with the Pacific Arctic whaling fleet, I have never met a whaleman who could tell me of a man that had been bitten. My friend, Mr. Truxton Beale, of Washington, a short time since, when a passenger on the Pacific Mail, showed his unbelief in shark stories by swimming across the shark infested harbor of Acapulco, although warned by the captain of the ship that he would be eaten up before he got a hundred yards away.

Traditional accounts of the rapacity of sharks are as extravagant as the records of some of the old writers who tell of dead sharks cast upon the shores of the Mediterranean of such size that men walked into the mouth and down the throat in order to inspect the stomach. Even Rondelet, in his History of Fishes, speaks of these animals as having swallowed men in entire suits of armor.

Documentary evidence as to shark bites is also very scanty. During the last fifty years, soldiers by the tens of thousands have swam at Fort Monroe, Va., yet there is no record of one having been bitten by a shark, nor have I been able to ascertain that any accident of the kind has occurred at Malta or Gibraltar. There does not appear to be a record of any one ever having been bitten by a shark off the British Isles. I have been unable to ascertain that a single bite of the kind is reported among the medical records of our War or Navy Departments or those of the Marine-Hospital. In a book about the West Indies, Mr. Charles Ives says it is singular that so few facts are reported which indicate the danger from Bahama sharks, and that the divers continue to be so numerous and bold. He has heard of but one instance in which a Nassau shark has dined upon a negro, and the report in that case is not well authenticated.

The *New York Herald*, a few years ago, gave an account of a boy who was bitten while swimming in East River, and afterwards died at Bellevue Hospital.

Medical literature has but few reports of shark bites. After ten years' diligent search I have found but seven references, the earliest in the *London Medical Gazette*, 1823, and the latest in the London *Lancet*, 1886. The bites occurred in Australia, South Africa and India. The Hooghley and Ganges Rivers are the worst places in the world for sharks and alligators. A particular kind of shark, the *Carcharras Gangeticus*, which is very fierce and bold, sometimes dashes among the crowds at the bathing ghats, and has been known to bite a boy in two feet of water. All persons bitten at these places generally die from the bite, for the reason that the shark, living on carrion portions of which stick between the teeth, carries infection to those whom it may afterwards bite. The former habit of throwing the dead in the river is supposed to account for the boldness of these particular sharks in attacking the human species.

Even admitting the occasional accident of shark bites, the danger therefrom is almost infinitesimal compared with railway travel or even accidents from horses; and neither this unimportant drawback, nor any other that I have mentioned, should have the least weight in preventing the cultivation and spread of an accomplishment that every one should countenance with a view, not to the renewal of the legendary exploits of Leander and Byron, but as a step in that branch of social evolution which better physical development and improved health tend to promote.

THE PHARMACOPŒIA OF 1890.

Read in the Section of the Practice of Medicine, Materia Medica and Physiology, at the Fortieth Annual Meeting of the American Medical Association, at Newport, June, 1889.

BY D. W. PRENTISS, M.D.,
OF WASHINGTON, D. C.

The decennial convention for the revision of the U. S. Pharmacopœia meets in Washington, D. C., in May, 1890. This matter of a Pharmacopœia and its periodical revision is of greater importance to physicians than is generally supposed. The Pharmacopœia is the authoritative guide to the pharmacist for the selection of drugs and the making of preparations from drugs. It contains such as are considered by this convention of sufficient importance to justify official sanction, and each ten years those which have not stood the test of experience are dropped, and others that within that time have been discovered to be of decided value are added.

The idea prevails much too generally in the medical profession that the Pharmacopœia is a book that belongs to the pharmacists *per se*, and I fear a large number of physicians have rather a confused idea as to what this book is. Many, I know, have within a very short period confounded it with the dispensatories.

When the convention for the decennial revision met in Washington in 1880 it was my fortune to be on a committee to provide for the entertainment of the visiting members. In this capacity I had occasion to call upon the physicians of the city for contributions to that end, and was met in many instances by the inquiry, "What have we to do with entertaining this convention? This is an affair of the pharmacists." But so far from being an affair of the pharmacists', a glance at the personnel of the convention of 1880 shows that of the sixty-four delegates present twenty-two were pharmacists and forty-two were physicians—nearly twice as many, and justly so, for the interests of the physicians are paramount in that the Pharmacopœia is directly dependent on their needs of drugs and drug preparations in professional work.

The convention is, however, necessarily composed of representatives of both professions, because upon the pharmacists devolve the duty of determining the best processes of making the preparations, etc. In the work of revision the physicians are more particularly interested:

1. In deciding as to what drugs and preparations shall be added to or dropped from the last Pharmacopœia.

2. In indicating the forms in which they desire to have drugs prepared for convenient use.

3. In prescribing the strengths of various preparations, such as fluid extracts, tinctures, etc., to secure, as far as possible, uniformity.

On the other hand, the portions of the work that come especially within the province of the pharmacist are:

1. The selection and care of drugs, that they may be of good quality and of uniform strength, and be properly preserved.

2. The determining of the best processes of making preparations to secure the same end.

Both professions are interested equally in

1. Securing uniformity of weights and measures.

2. Encouraging the establishment of an international Pharmacopœia.

As also are both pharmacists and physicians interested in the various tables, "thermometric equivalents," "percentage and special gravity," "solubility," etc., which appear in the book of 1880; and though occupying a very modest position, they represent an immense amount of work.

The work of revision in 1880 was by the convention placed in the hands of a revision committee of twenty-five, of whom twelve were physicians and thirteen pharmacists. The labor of completing the work, however, was not so equally divided, an immensely larger share falling to the pharmacists, especially to the energetic chairman, Prof. Charles Rice, of Bellevue Hospital, New York, to whom too much credit cannot be given for his indefatigable industry. It was manifestly proper that the pharmacists should have the larger share of the work, for the bulk of the volume is devoted to the details of pharmaceutical processes. But there is much coming within the province of the physician that may very advantageously receive his attention, and it is hoped that physicians will give it more attention in 1890. Already the pharmacists are actively at work in the field. At the meeting of the American Pharmaceutical Association, now being held in San Francisco, no less than fifty-six distinct queries upon this subject will be reported on and discussed, mostly technical, but others of general interest, such as 41 and 42: 41. Cannot the nomenclature of the Pharmacopœia be improved? 42. What system of weights and measures should be adopted in the next revision of the Pharmacopœia? will be recognized as being of general

interest. I am not aware that any official action has been taken by this Association.

It is now too late to do more than appoint the three delegates to the convention, to which we are entitled, for the convention meets in May, 1890, before the usual time of meeting of this association, and there would be no opportunity for a committee to report. We can, however, appoint the delegates, and I have no doubt the Association will do this, and perhaps give them instructions expressing at least the value we place upon the periodical revision of our Pharmacopœia.

Among the most important measures to be decided upon will be:

1. In regard to the strengths of galenical preparations as to uniformity.

2. Uniform system of weights and measures.

First.—In regard to the uniformity of strengths of such preparations as tinctures, fluid extracts, solid extracts, wines, etc. Time does not allow a full discussion of this question, but I would like to say a few words to indicate the importance of uniformity in this direction. If we could make the liquid preparations of crude drugs of a definite percentage of strength, does it not at once appear that only the dose of the crude drug would have to be learned? For instance, fluid extracts are of 100 per cent. strength; their dose is the same as the drug from which they are made. Then make all officinal tinctures 10 per cent., and their doses will be one-tenth that of the drug from which they are made. Make solid extracts 500 per cent. strength, as is now the solid extract of ergot. What is more simple than the directions for making this extract: "Fluid extract ergot, 500 parts; evaporate to 100 parts." Then the dose of a solid extract would be five times that of the drug.

An attempt was made in this direction of uniformity in the last revision. Liquid preparations of opium were made 10 per cent., except paregoric. In other tinctures those approaching 10 or 20 or 5 per cent. were made of those strengths respectively, so that we have now

20 per cent	23	tinctures.
15 "	9	"
10 "	23	"
8 "	6	"
5 "	2	"
Irregular	12	"
Total	75	"

It is apparent from this list of seventy-five tinctures that this classification of strengths is of no assistance to the physician or medical student in remembering doses. Every teacher of materia medica will appreciate the importance of simplifying the labor of students in the line of dosage. These tinctures should all be of 10 per cent. strength. I have shown in another place that this is entirely feasible.

It has been said by high authority that our present Pharmacopœia is now the best in the world. If we still further perfect it, it will be taken as the guide in making the coming international Pharmacopœia, concerning which a congress meets in Paris on the 1st of August of this year.

Second.—A second important consideration is the question of uniform weights and measures. This will also be considered by the congress in Paris on August 1, and we need not doubt what system will be adopted. The metric system is already international in science, and is in use in all civilized nations except England and Russia. Where the metric weights and measures are used the proportion in every formula is expressed in the per cent. ratio. It is becoming more and more important every year for the educated physician and man of science to be familiar with metric terms.

A great proportion of medical literature comes to us from nations using metric terms, and it will be noticed that medical journals, in quoting from foreign publications, now usually give the metric terms without translating them into our own cumbersome weights and measures.

Third.—A third subject, the importance of which can hardly be estimated, is the necessity of devising some plan for securing uniformity in strength as represented by the active principle of many preparations, as tinctures and fluid extracts. For example, such crude drugs as aconite root, belladonna leaves and digitalis leaves vary greatly in their strength, even though the best care is exercised in their selection. By the present system of making preparations the latter necessarily must vary in like proportion, and this is undoubtedly the cause of many disappointments in therapeutic effects. With tincture of digitalis and tincture of cannabis indica it is necessary, in individual cases, to begin with a minimum dose and gradually increase the dose until the desired effect is obtained. The remedy for this condition of affairs is obvious. A standard strength of the active principles should be fixed upon, and the value in active principle be determined by assay. This, if honestly carried out, would be a great improvement upon the present system. It would entail more labor and greater care on the manufacturing pharmacists, but it would be to their interest to carry out faithfully such requirements, for physicians would not be slow to discover whose preparations were most reliable.

There are other matters in this connection that might perhaps be profitably discussed, but as the object of this paper is only to call the attention of my colleagues to the importance of the revision of the Pharmacopœia which will be made in 1890, I will no longer impose on your attention.

AN OPERATION FOR UTERINE FIBROID.

Read in the Section of Obstetrics and the Diseases of Women at the Fortieth Annual Meeting of the American Medical Association, June, 1889.

BY A. B. BOWEN, M.D.,
MAQUOKETA, IA.

Subperitoneal or extra-uterine fibroids are justly regarded, in the treatment, as one of the most difficult problems in surgery, hence this report.

Mrs. W., æt. 38, and mother of four children, detected a movable "lump" or tumor in the left iliac region some three years prior to the operation for its removal. She attributed its cause to over-exertion and fright, caused by a prairie fire that consumed her home. In a few months it had attained a size that inconvenienced her. She received little benefit from her local physicians, whom she consulted from time to time, there being little uniformity of opinion in diagnosis and treatment.

Menorrhagia and dysmenorrhœa were well marked characteristic symptoms, and of late a frequent recurrence of hæmorrhage has annoyed and weakened her. I first saw the case in April, 1883; found the patient confined to her bed by an enormous abdominal tumor, evidently fibroid; her flesh and strength were much exhausted, and she entertained little hope of her deplorable condition been benefitted by treatment.

I of course gave her little encouragement, but that little through surgical resources. The condition of the patient was so hopeless that it inspired desperate resources, and after calmly listening to the details of the operation, she resolutely determined to risk the chance, and even demanded the operation. Her financial condition was such as to deprive her of the skill of an expert, or specialist, and I was urged to this formidable operation and my first *laparotomy*. After what appeared to me to be proper preparations for so formidable an operation, and in spite of the meagre encouragement found in the literature of uterine fibroids, from Thomas, Emmett, Goodell, Schroeder and Gross, the time was fixed, the assistants selected, and the preliminaries arranged.

Friday, May 11, 1883, the operation was done. The usual incisions through the linea alba below the umbilicus, enabled me to explore the abdomen for adhesions, which were slight and easily separated between the tumor and the peritoneum, but the omentum had formed intimate and extensive union with the tumor; its large venous trunks entering and blending with the tumor. Several of these vessels were ligated and divided between the silk ligatures, and the omentum entirely detached. The abdominal incision was extended to the ensiform cartilage, which extensive incision barely offered room for the passage of the fibroid growth, some two feet in diameter.

The tumor was rolled out of the abdominal cavity, and its attachments sought for, which proved to be so firmly adhered to the floor of the pelvis, including the pelvic viscera, that I deemed its separation fatal to the patient, her condition being alarming in the extreme from shock. Hypodermics of brandy were given, and inhalations of nitrate of amyl, to arouse if possible her waning vitality. Meanwhile the toilet of the peritoneum was hastily and imperfectly arranged, the enormous fibroid mass was rolled back into the abdomen, and its walls with difficulty made to meet over and around it. Sutures, long adhesive strips, and a flannel bandage retained them in place, after iodoform and absorbent cotton had been applied to the wound.

The patient was sustained and reaction encouraged with artificial warmth, morphine and atropine hypodermically, and such other treatment as seemed proper. It was hardly expected, by myself or assistants, that reaction would take place, so profound was the shock. The patient's home being some five miles in the country, I did not see her till next morning, and then took my post-mortem case with me, as I confidently expected to use it. To my surprise reaction was complete, the mind clear, and there was entire freedom from fever and pain. The patient continued to do well; the wound healed principally by first intention, but slight fever attended the healing, and but very little peritoneal inflammation was encountered. After reaction neither pulse or temperature were above 100°. The patient regretted I did not complete the operation.

Over six months of languishing and suffering succeeded, but very little acute pain attended it. November 21 I made the autopsy and found a suppurating fibroid, removed thirty-two pints of pus. The tumor was firmly adherent to the abdominal walls. The solid portion weighed thirty pounds and had no pedicle. The opinion held at the autopsy was, that its removal would have been fatal, at the time of the operation.

ADDISON'S DISEASE, WITH A REPORT OF AN AUTOPSY.

Read in the Section of the Practice of Medicine, Materia Medica and Physiology, at the Fortieth Annual Meeting of the American Medical Association, June, 1889.

BY W. S. WATSON, M.D.,
OF MATTEAWAN, N. Y.

About all that seems to be known of this disease is that it is due to some lesion of the suprarenal capsule. We deem it almost needless to enter into any description of those glands, nor shall we attempt to add much or venture an opinion as to the part they subserve in the human economy.

The disease under consideration presents some well marked symptoms, differing in degree; but

rarely do we find all of the various symptoms combined. Generally one or more sets of well defined symptoms predominate, to the exclusion of others. In most instances that have come under our observation there was persistent nausea; later came vomiting, gradual asthenia, marked local bronzing, more or less rapid loss of flesh during the acute attacks of gastric disturbances, which occurred at intervals. The sufferers from this peculiar ailment are irritable, cross, given to periods of despondency. Failure of strength is one of the earliest symptoms, though this condition may come on slowly or rapidly. When quiet, the patient feels strong and fairly well, but a little exertion causes him to feel faint and weak. There is a lack of energy, and oftentimes there is a willingness to lie in bed day after day. There is also muscular debility, which is irregular, the patient being better one day and worse the next.

The progressive discoloration of the skin is not, we think, that of a bronzing, as has generally been stated, unless the sufferer possesses a naturally dark skin. In the blonde, or light-complexioned individual, we have marked changes of the skin—that of a bleached or bloodless appearance, assuming at the near approach of death a jaundiced hue, without the heavy, dark, pigmentary deposits about which so much has been said.

If we accept Professors Kölliker and Bergamon's microscopical anatomy of these ductless glands, and which our own observation corroborates, they are in structure small, somewhat flattened glandular formations situated behind the peritoneum and in front of the upper end of each kidney, having an external, cortical and internal medullary substance.

Microscopical anatomists differ in their views respecting these minute columnar masses. The medullary portion is composed of nuclei and granules having numerous small veins. The nerves are also numerous, and belong to the ganglionic, or sympathetic, and the pneumogastric. The blood-vessels and nerves lie in the stroma of the connective tissues, forming two kinds of capillary plexuses, one being in the cortex, having elongated meshes, the other in the medullary substance. The arteries, some twenty or more, arise as numerous small vessels from neighboring larger trunks, as the phrenic, aortic and renal, and thence penetrate directly into the medullary substance, or ramify into the cortical. Kölliker says these vessels empty on the right side into the vena cava; on the left, into the renal vein. Reasoning from the standpoint of these glands, they being so abundantly supplied with blood-vessels and nerves, and considering their origin and insertion, there remains but little ground for doubt as to their importance. Although we remain in darkness as to their exact function, yet we feel sure that the grave symptoms attending diseased conditions of the supra-renal glands are explainable when we consider the nervous connection, the venous and the arterial supply to these glands. The asthenia attendant may reasonably be attributed to the prolonged reflex irritation of the nerve centres. Heart disturbances, weak pulse, shortness of breath upon slight exertion, due to reflex implication through the pneumogastric and the phrenic nerves, the extreme nausea and vomiting during the last stages of this peculiar ailment, point to the solar-plexus and ganglia.

Brown-Séquard found that ablation of the supra-renal glands or capsules was uniformly fatal, and he believed death to be due to the retention of some poisonous substance in the circulation which it is the office of these glands to remove. Other men, equally eminent, claim that death following the removal of the supra-renal capsules is certainly attributable to hæmorrhage or injury to the nerves. We are inclined to the belief of Brown-Séquard, since it is true that inflammation of these ductless glands do bring about marked pathological changes or functional derangements. The conclusions at which we have arrived are based upon autopsies made by us, together with information gleaned from such authorities as Köllicker, Brown-Séquard, Carpenter, Addison, and others. We should look upon the glands under consideration as important, and regard them as possible eliminators, even though possessing no distinct efferent ducts. It is conceded by physiologists and microscopists that these glands are more abundantly supplied with blood-vessels than any other glandular body of similar proportions, and also with a larger number of nerves.

We shall describe a case of "Addison's disease" which was followed by an autopsy upon the patient, Mr. W. H. Cook, aged 40 years, who presented a pronounced bronzed appearance for about four years previous to his death. He was of a dark, bilious complexion naturally, possessing a delicate constitution, and a hatter by trade. During the last two years of his life he complained of what he thought were bilious attacks, which caused pain in his kidneys. His family history gives no evidence of phthisis; it is believed that one sister died of cancer of the womb. Mr. C. had been treated by several physicians before going to Roosevelt's Hospital, New York City, in which institution he remained for some weeks, receiving no benefit. He returned to his home, where we were called to see him on November 22, 1888. We found him suffering from the effects of a decided chill, which was due to exposure in a rainstorm while attending the funeral of his wife. The surface of his entire person was cold, his pulse slow and weak, constant nausea and vomiting, complete loss of appetite, skin much bronzed—in fact he presented a decided

mulatto appearance. He was very much emaciated, nervous and restless. His nervous system had just received a severe shock by the loss of his wife, who died two days previously. He complained of some pain in the stomach and in the region of the kidneys. He was inclined to lie in a semi-comatose condition a part of the time; at times his mind was clear, and he could converse intelligently.

Nearly all the medicine given to him was rejected, though some stimulants were retained, and external warmth was applied, which had the effect of restoring the circulation sufficiently to get him warm. We visited him daily until December 1, when he died. On December 2 we made an autopsy. The heart was first examined and presented nothing abnormal. The stomach was almost normal in appearance, showing possibly a slight evidence of recent congestion; the liver and kidneys were normal in appearance; the supra-renal capsules on the exterior were normal, with the exception that both were considerably enlarged, the left one being about one-fourth the larger. On examination of their interiors there were found evidences of chronic inflammation which had passed successively through the stages of fatty and cheesy degeneration. Some portions of each pelvis were mere fibrous sacs containing a puriform liquid and some gritty particles, the calcareous results of cheesy degeneration. The internal cell masses of a large portion were almost obliterated and the medullary substance considerably broken down, apparently from the results of inflammation.

Question.—What is the cause of the inflammation of these ductless glands, and how do they bring about such grave symptoms when diseased?

MENTAL WEAKNESS RESULTING FROM THE PRESENCE OF AN ENCHONDROMA OF THE SEPTUM NASI.

Read by title before the Section of Laryngology and Otology, at the Fortieth Annual Meeting of the American Medical Association, June, 1889.

BY W. PEYRE PORCHER, M.D.,
OF CHARLESTON, S. C.

The following case exhibits a remarkable sequence of cause and effect, even to a condition bordering on mental abberation, from the presence of a cartilaginous spur projecting from the septum nasi, and pressing against the contiguous turbinate. That the recovery was a direct result of the treatment instituted, is beyond a doubt for the following reasons:

1. The patient's illness had existed for over a year, and was at the time of his first visit to me distinctly worse than at any previous time.

2. He had just returned from a large watering-place, where he had been for six weeks, and during that time he had not only received no benefit, but his symptoms had increased to such an extent that his return home became imperative.

3. His improvement after the removal of the growth was immediate and permanent, and he is at present enjoying robust health.

H. F. P. White, aged about 32, avocation planter. His history was, that for two years previous he had been subject to *frequent attacks of coryza*, accompanied with vertigo, headache, great torpidity of bowels, and general malaise. During this period he had two attacks of pleurisy, and as a result of it his nervous symptoms became especially prominent. He had constant and prolonged insomnia, hysterical pains, noises and jumping movements in his left side. The latter annoyed him to such an extent that he tore open his under clothes over that region in the effort to get at or remove the cause of the unpleasant sensations.

His attendants thought he was suffering from melancholia, and he was advised to visit one of the springs, in hopes that he might derive benefit from the change; and he therefore spent six weeks at a large watering place, as above stated, but returned home extremely nervous, and without having received the slightest benefit. He was able to sleep but very little at night, continually brooded over his condition,—thinking that he was doomed to consumption on the one hand, or to insanity on the other; both being hereditary taints in his family; and on this latter account some of his near relatives thought he had softening of the brain.

It was in this condition that I first saw him, scarcely able to control his nervousness, and with but little hope of ever regaining his former mental or physical condition, as he had been unable to attend to his business for over a year.

It was at once apparent that his mind must be set at rest, and this I did by assuring him that his nervous symptoms could be controlled, and ordered him a hepatic stimulant and laxative, as follows: ℞. Pil. hydrarg., grs. v; podophillin, gr. ¼. M. S. at once. Also, ℞. Fl. ext. stillingi sil., ʒ v; tr. nucis vom., tr. belladonna, tr. physostigmatis, āā ʒ j. M. S. in water before meals.

While making this general examination, I noticed that he had a frequent tendency to "sniffling," and this led me to make a rhinoscopic examination. A cartilaginous projection was discovered jutting off from the septum and in contact with the left inferior turbinated bone. It was papillomatous in character, and very indurated. It caused him to bend his nostrils forcibly over to that side to get breath, and to clear them of accumulated secretion. He was entirely unaware of the presence of this growth. A small portion of the apex was cut away, sufficient not only to relieve the pressure but to leave a vacant space between it and the turbinate.

He received no additional treatment, except general advice as to hygiene, etc. His subsequent history was, that his insomnia and general depression rapidly disappeared.

A relative occupying an adjoining room informed me that she first became aware of his improvement by an absence of the frequent sneezing and clearing of his throat on first awakening in the morning, to which he was addicted; and he has since informed me that he has never been so free from coryza as he has been since the removal of the growth, not having had one attack in twenty months.

Nor has there been any recurrence of the pleurisy. His health is now completely restored and he no longer fears consumption or insanity. Here we have a distinct sequence of cause and effect: recovery following the removal of the exciting cause.

THE SURGERY OF THE SPINE.

Read in the Section of Surgery and Anatomy, at the Fortieth Annual Meeting of the American Medical Association, June, 1889.

BY J. WILLIAM WHITE, M.D.,

PROFESSOR OF CLINICAL SURGERY IN THE UNIVERSITY OF PENNSYLVANIA; SURGEON TO THE UNIVERSITY, PHILADELPHIA AND GERMAN HOSPITALS.

Dr. White divides the spinal troubles which may necessitate surgical interference into three classes: traumatisms, caries, and neoplasms. He reviews the history of the surgery of these conditions, gives the details of two cases in which he performed resection of the spine, and reaches the following conclusions:

1. The objections urged against operative interference in spinal traumatisms were partly theoretical (hæmorrhage, frequency of absolute destruction of the cord, pressure from inaccessible fragments of bone, etc.,) and have been shown to be unsupported by clinical facts. They were largely due to a well-founded dread of *a*, the shock, in the cases operated on in preanæsthetic times, and *b*, consecutive inflammation, suppuration and pyemia in pre-antiseptic periods. The later results, which now constitute our only safe basis for generalization, are distinctly encouraging, and resection of portions of the vertebræ in fractures, possibly even in dislocations, should be recognized as an eminently proper operation and in suitable cases altogether warranted by the facts in our possession; and further, such cases are by no means rare or exceptional.

2. There can be still less doubt that the testimony of pathologists and practical surgeons indicates that the cause of the paralysis of Pott's disease is in many instances an extra medullary proliferation of connective tissue, assuming the density and proportions of a neoplasm, occupying the space between the dura and the interior surface of the laminæ, not apt to be associated with intramedullary changes or with destructive degeneration of the cord, and very frequently removable by operation.

3. Every case of focal spinal lesion, thought to depend on a tumor and not distinctly a malignant or generalized disease, should be regarded as amenable to operative interference, no matter how marked the symptoms of pressure may be or how long continued.

4. The method of extension, as recently revived, is well worthy of preliminary trial in the first two classes and in obscure cases thought to belong to the third class. It has not yet been tried in a sufficiently large number of cases to establish its exact limitation, but it is unquestionably a therapeutic measure of vast importance in spinal injury and disease.

It is customary and proper in deciding upon any serious surgical procedure involving risk to life, to consider well the prospects of the patient in the event of non-interference and to be largely influenced by them. Looked at in this light the operative surgery of the spine as regards traumatisms, caries and neoplasms may fairly be said to have a rapidly widening field and to deserve more serious and careful consideration by practical surgeons than it has received for many years.

THE HISTORY AND EXHIBITION OF A DOUBLE-HEADED MONSTER.

Read in the Section of Obstetrics and the Diseases of Women, at the Fortieth Annual Meeting of the American Medical Association, June, 1889.

BY E. F. WALKER, M.D.,

PROVIDENCE, R. I.

This specimen which I have the pleasure to show you, is a monster of the type known as Ischiopagus. Unfortunately the history of the labor is very meagre and incomplete, as the woman, who gave birth to it, was attended by a midwife, of not a very intelligent class and the details of the process are usatisfactory. I have tried to see the patient herself, but have not been able to accomplish my desire. However, such details as were obtainable I submit, asking your indulgence for their incompleteness.

Mrs. C., 30 years of age, born in Ireland, married, and a primipara. Early in the afternoon of July 15, 1888, labor pains first began and at 7 P. M. the midwife arrived and took charge of the case. The pains at that time were strong, and an early completion of the labor was anticipated. She continued to have very great pain until one o'clock in the morning, when the midwife "broke the waters to hurry her up," and states that from this time until the end, her pains were the most severe she ever saw, in fact she says they came so close together that the woman had no rest; finally at five o'clock, or four hours after the discharge of the amniotic fluid, with one long and severe pain, the mass was born, being

followed in about five minutes, by the spontaneous expulsion of the placenta. There was no very great hæmorrhage; in fact she states the woman did not flow as much as most women do. I enquired as to the condition of the perineum, but could not get any satisfactory information, but judge that it could not have been seriously injured as the patient made a rapid recovery, and at the end of a week was doing her own housework. Since then she has enjoyed her usual health and is now pregnant again.

The monster lived until about seven o'clock the next day, or twenty-six hours in all. When born it cried, and in the words of the midwife, "both ends took milk from a spoon and swallowed quite greedily." Its weight at birth was between fifteen and sixteen pounds. There was but one placenta and one cord; there was no history of fright or injury and the woman had not experienced any unusual symptoms during her pregnancy, and had no reason to assign for any such unusual condition.

The mass is of crescentic shape—its longest surface following the line of the abdomen, which from vertex to vertex measures twenty-one inches. It consists of two bodies joined together at the buttocks, with a head at each end. The larger one has a trunk, two arms and two legs well developed; the other or smaller one has the right arm and right leg well developed, but a deformed left forearm and hand, and a deformed left foot and leg (the hand shows but three fingers, of unequal length). The left foot has a shortened little toe, due probably to the absence of its metatarsal bone, and the third and fourth toes are webbed. At the site of the umbilicus of the larger child there is a placental shaped mass, measuring 4½ inches by 3½ inches, with its convexity outwards and the cord, which went to a normal placenta emerging from the left side. This mass is firm in consistency, and lobulated. The smaller of the two twins has a protuberance springing from the cervical region and suggestive of spina bifida, is soft and apparently contained fluid in its recent condition. This mass measures in its longest diameter four inches and in its shortest three inches. At the site of the anus in the larger twin, there exists a suggestion of an imperforate one.

Lying between the left thigh of the larger and the right thigh of the smaller twin, *laterally*, is the vulva, the thigh of the left closing the vagina on that side, and on the right there is an undeveloped labium externum.

MEDICAL PROGRESS.

TREATMENT OF INFANTILE ECZEMA.—1. Eczema intertrigo: Seek to combat the cause (generally acid diarrhœa) then apply cold compresses (solution of boric acid, 5 per cent., and water in equal parts), or if the surface oozes considerably dust it over with talc or oxide of zinc. Insist on great cleanliness.

2. Eczema of the head: If the child is fat modify its diet; if scrofulous give cod liver oil with phosphorous or an arsenical preparation (ocidum arsen. 0.005. grm. Boil with distilled water 40.0 grm. Dose one coffeespoonful). Suppress any occasional external cause, such as pediculosis (sublimate 1-1000) then soften the crusts with oily inunctions and apply a boric acid pomade:

℞. Acid. boric. . . . . 1.5 grm.
Zinci oxidi . . . . . 5.0 "
Vaseline flav. ad . . . . . 30.0 "

Or use Wilson's pomade:

℞. Benzoës pulv. . . . . 1.0 grm.
Axung. porc. . . . . 32.0 "
Cola, adde zinc. oxyd . . . . . 5.0 "

In the squamous forms:

℞ Hydrarg precip. alb. . . . . 1.0 grm.
Bals. Peruv. . . . . 5.0 "
Ung. Wilson ad . . . . . 30.0 "

3. Eczema of the trunk or limbs: Anti-scabetic treatment is necessary (bals. Peruv. or styrax and olive oil in equal parts).

It suffices generally to apply powdered medicaments upon the diseased surface after using vaseline.

In squamous eczema with infiltration of the skin rub twice a day with a few drops of oil of cade, then dust with starch or apply vaseline. At the end of two to four days bathe the diseased part with tepid soap suds and after twenty-four hours recommence treatment with oil of cade.

Tar is not to be used in the eczema of children. —*Archiv. für Kinderheilkunde.*

SAMBUCUS NIGRA AS A DIURETIC.—M. G. LEMOINE, of Lille (*L'Union Médicale*), has made a study of Sambucus nigra (elder) the properties of which were discovered by the Ancients. The soft white bark next to the wood is the part possessing diuretic properties, but it is absolutely necessary that it be fresh. The author employed it in a decoction made by boiling a handful of the bark in a litre of water, the dose being from a litre to a litre and a half *per diem*.

Sambucus thus used is a diuretic of the first order rendering great service in the treatment of ascites and anasarca dependent upon kidney and heart lesions. With the administration of Sambucus it is often possible to increase the daily secretions of urine in a short time from 400 grams to 2,000 grams, or even more. The best effects are obtained in the albuminuria of nephritis and in the ascites which accompanies tubercular peritonitis in children, but its influence upon the ascites of hepatic cirrhosis is feeble. It

also acts upon the intestines, producing from four to six liquid stools *per diem*.

Lemoine believes that Sambucus produces its diuretic effect by a direct action upon the kidneys; it does not influence the heart or the circulation except through its diuretic action. It is a diuretic which owes its properties to an action upon the renal epithelium.

Combemale and Dubiquet have completed the researches of Lemoine obtaining the following results:

1. To produce polyuria with the entire bark requires a dose of from nine to ten grams per kilogram of the bodily weight.

2. To produce the same effect with the outer bark requires still larger quantities.

3. A much more intense effect is produced with the inner bark when given to animals in the proportion of four grms. per kilogrm. of the animal's weight.

4. After macerating the inner bark, three grm. *per kilogrm.* of the bodily weight is sufficient to produce polyuria which is accompanied by nausea, vomiting and diarrhœa. This is accompanied by lowering of the temperature and retardation of the pulse and respiration.

FOREIGN BODIES IN THE BRONCHI.—KOBLER reports two cases from Schrötter's Clinic of foreign bodies lodged in the bronchial tubes and gives a short sketch of the symptomatology of such cases.

There are three principal diagnostic features of the presence of a foreign body in the bronchus: the history, the absence of the foreign body from the upper air passages and a series of symptoms which result from the obstruction present in the bronchus, namely, variations in the character of the percussion and auscultatory sound as compared with those of the healthy side. The condition which presents itself to the examiner is that of a bronchial stenosis of sudden formation.

If the foreign body is not removed, then after the subsidence of the first sudden paroxysms a period of well being may ensue until the attention is again directed to the foreign body by certain sequelæ which always attend these cases. The sequelæ consist mainly in inflammatory processess set up around the foreign bodies, which usually lead to necrosis or pus formation. A rare sequela is bronchiectasis in the affected part. The reporter describes two such cases. In both of these the patients had no knowledge of the entrance into the air passages of a foreign body. The symptoms of bronchiectasis gradually appeared and death finally ensued. The autopsies revealed in one case the presence of a piece of bone and in the other a shirt button as the cause of the closure of the bronchus and the resultant sequelæ. The reporter explains the remarkable but often observed fact of the penetration of rather large foreign bodies into the air passages without the knowledge of the patient by the diminished reflex excitability of the respiratory mucous membrane in these individuals. While as a rule the presence of a foreign body gives rise to a more or less violent inflammation of the lung tissue in the cases reported there was at first only a bronchitis and then, as a result of this, chronic inflammatory changes of the pulmonary parenchyma. The principal factors then in the development of bronchiectasis were: moderate powers of resistance on the part of the inflamed bronchial walls, interstitial proliferation of the connective tissue and contraction of the lung tissue, and the abnormal increase of air pressure produced in that portion of the bronchial tree behind the obstruction. It is worthy of remark that in the first case there were no symptoms of bronchostenosis.—*Cent. für. Klin. Med.*

PNEUMONIA AND LA GRIPPE.—MESSRS. SÉE and BORDAS have reported to the French Institute of Medicine some observations regarding the pneumonia of la grippe. These are their conclusions:

1. The lanceolated diplococcus of Pasteur and Talamon are always found in the lungs of individuals who have succumbed to fibrinous or lobular pneumonia. In this case cultures made with the fibrinous exudate do not give pure cultures of pneumococci. A certain number of microorganisms, such as the streptococcus pyogenes, staphylococcus areus, etc., are found.

2. By puncturing the spleen we have obtained pure cultures of the lanceolated diplococci in great abundance.

3. Rabbits inoculated with cultures from the blood of the spleen quickly succumb with all the signs of fibrinous pneumonia.

4. We have not employed the lanceolated diplococcus, found in the blood of pneumonia patients either before or immediately after death, except in the case of a patient who died from a general infection with meningeal complications.

5. We consider pneumonia not merely as a local disease of infectious origin, but also as a disease which may become infectious in the sense that it may invade other organs.—*La Prov. Méd.*

MERCURIAL INJECTIONS IN SYPHILIS.—From a study of numerous cases in which mercurial injections have been given DR. HARTMAN concludes that the hydrargyrum oxydulatum nigrum purum suspended in pure olive oil and administered by intra-muscular injection is a good antisyphilitic, and possesses a special advantage over calomel in that it excites less local reaction and produces less pain than the latter.—*St. Petersburger Med. Woch.*

THE
Journal of the American Medical Association
PUBLISHED WEEKLY.

SUBSCRIPTION PRICE, INCLUDING POSTAGE.
PER ANNUM, IN ADVANCE.....$5.00
SINGLE COPIES.....10 CENTS.

Subscription may begin at any time. The safest mode of remittance is by postal or express money order, drawn to the order of THE JOURNAL. When neither is accessible, remittances may be made at the risk of the publishers, by forwarding in REGISTERED letters.

Address
JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION,
No. 68 WABASH AVE.,
CHICAGO, ILLINOIS.

All members of the Association should send their Annual *Dues* to the *Treasurer*, Richard J. Dunglison, M.D., Lock Box 1274, Philadelphia, Pa.

LONDON OFFICE, 57 AND 59 LUDGATE HILL.

SATURDAY, APRIL 19, 1890.

SYRINGOMYELIA.

It is but a few years since syringomyelia was looked upon as merely a curiosity of morbid anatomy, but recent investigation has lifted from it the veil of obscurity, and it may now be regarded as a disease having a definite pathology and a sufficiently positive symptomatology to render its diagnosis comparatively certain in most cases.

Our knowledge of it comes chiefly from France and Germany. It was not, indeed, until two years ago, that the first complete study of the subject and review of its literature appeared in this country, in connection with a report of several cases, contributed by M. ALLEN STARR to the *American Journal of the Medical Sciences*. More recent contributions are those of CHARCOT, in the *Bulletin Médical*, BRUHL, in the *Archives de medicine*, and IRA VAN GIESON, in his Cartwright prize essay for 1889. Several other articles have also appeared.

The essential feature in the pathology of syringomyelia is not simply the existence of an abnormal cavity in the spinal marrow, as the name implies, but the presence of a gliomatous growth (glio-sarcoma), through the disintegrating action of which a cavity is formed. An abnormally large central canal (hydromyelia) is not infrequently met with as a result, either of original defect or of subsequent dilatation. It is highly probable that some of the cases of syringomyelia that have been reported were of this character, especially those cases in which no symptoms of spinal disease were observed, the disease being discovered post-mortem. Van Gieson adheres to the view that at least "some cases of syringomyelia are cases of congenital tubular defects in the cord, producing no symptoms until a gliomatous hyperplasia of their walls, or a tumor arising in the wall becomes large enough to injure the cord."

The symptoms of syringomyelia are produced for the most part by the direct extension of the new growth into the spinal marrow, particularly into the gray matter, but may arise in part also from œdema of surrounding parts, or from pressure upon them. There is usually complete destruction of the gray commissure, along with a greater or less portion of the posterior horns; and the neoplastic tissue frequently extends through the lateral columns to the anterior horns. The most frequent seat of the glioma is the cervico-brachial enlargement of the cord; it may reach up to the bulbar origin of the fifth pair of nerves, or it may be situated much lower. Sometimes the entire length of the cord is invaded, sometimes only a comparatively small segment of it is involved. The central canal is, however, usually dilated throughout the greater part of the cord. The symptoms vary greatly in different cases, but correspond in their location to the parts whose spinal nerve centres lie in the part of the cord that is the seat of disease.

In character, the symptoms are sensory, motor, vaso-motor and trophic. The distinguishing feature of the sensory disturbances is the fact, that sensation is not affected in all of its departments, but there is what may be called a dissociation of sensation. A diminution of the sensibility to temperature, or an entire absence of it, appears, as a rule, to be the first manifestation of the disease. The thermo-anæsthesia is distributed to zones corresponding in location to the region of the cord in which the posterior gray matter is affected. It is, however, seldom recognized until sought for; or is discovered accidentally upon the receipt of a severe burn without pain. Analgesia is usually present in these zones, but hyperæsthesia has been observed. The special senses remain intact. The muscular sense and tactile sense generally remain normal, but may be to a variable degree obtunded. Charcot has observed but one instance in which this peculiar dissociation of sensation was ex-

hibited, anomalous case of hysteria in the male. The muscular and tactile sense are affected only when, as a result of the direct action of the glioma, or œdema, or pressure, the integrity of the posterior white columns is disturbed.

Motor disturbances are frequent, not constant; they are various, and not characteristic. That most commonly observed is a paresis of one or both of the lower extremities, or of only certain muscles. At first unilateral, it generally becomes bilateral and commonly extends to the trunk. It is sometimes attended by a reaction of degeneration in the paretic muscles (Starr).

Muscular atrophy is one of the most constant and characteristic symptoms of the disease, next to the sensory disturbances already referred to, and is regarded by Charcot a trophic disturbance. The atrophy commonly begins in the upper extremities, but shows a tendency to become generalized. It produces a clawing of the hand (*main en griffe*), closely resembling that of progressive muscular atrophy. It is highly probable, indeed, that many cases of syringomyelia have been mistaken for this disease. Trophic and vaso-motor disturbances are also seen in the skin, in the subcutaneous cellular tissue, and in the osseous system. The skin is the seat of herpetic eruptions, eczemas, urticaria, bullous or phlyctenular eruptions, and there is sometimes a decided thickening of the epidermis of the extremities; the nails may also be affected in a manner resembling a painless whitlow. In the osseous system we meet with frequent arthritis, hyperostosis and fragility of the bones.

More remote accessory symptoms, depending upon the outward extension of the disease or pressure, are ataxic manifestations, spasms, contractures, or bulbar disorders.

The exact course of the disease cannot yet be mapped out, owing to the fact that thorough and accurate observations of cases have been so few. Its duration is variable; it is usually prolonged; at times its progress is very slow; it may even remain for years stationary; but as a rule, at no very remote time from its inception, the patient becomes bed-ridden and helpless, bed-sores develop, and finally death ensues from asthenia. Occasionally the death is sudden.

Bearing in mind these data, the diagnosis should not be a very great difficulty. The disease is confounded for the most part with progressive muscular atrophy, amyotrophic lateral sclerosis, multiple sclerosis, tabes, hypertrophic pachymeningitis, multiple neuritis and tumors situated outside the membranes. All these affections have certain features common to it, but as is emphasized by Charcot, none of them possess to any marked degree the dissociation of sensation which is so pronounced in syringomyelia.

THE ATTEMPTED RETROGRADE MOVEMENT IN MEDICAL EDUCATION IN THE STATE OF NEW YORK.

It ought to be very gratifying to the members of the medical profession, who are earnestly interested in protecting it from further accessions of ignorant and illiterate persons, that the leading journals of the State of New York, without regard to political affiliations, are making such vigorous protest against the repeal of the Act of 1889 of the Legislature of that State, providing for the preliminary examination of all intending medical students. The standard of literary acquirements established by the Act is low enough, contemplating hardly more than an ordinary grammar school acquaintance with *arithmetic*, *grammar*, *geography*, *orthography*, *American history*, *English composition*, and the *elements* of *natural philosophy;* but low as it is, parties interested in securing fees from young men and, for that matter, from old men as well, who, in this country which prides itself on its public school system, fall short of it, are actively at work to effect its repeal before it has been a year in operation and an opportunity offered for its practical test, and they have actually succeeded in carrying a vote for its repeal through the Senate. The plausible pretext for attack is the requirement of examination by State Regents, but it is evident that the faculties of medical schools, which make this pretense, can not very well be trusted with the work of examining proposed matriculants.

The following editorial on this matter by the New York *Sun* ought to receive the hearty approval of every reputable physician in the country:

SHOULD PHYSICIANS BE ILLITERATE?

An Act was passed by the Legislature in the session of 1889, providing that all persons intending to pursue the study of medicine must pass a preliminary examination in arithmetic, grammar, geography, orthography, American history, English composition, and the elements of natural philosophy. The Act further provided that this examination should be conducted under the authority of

the Regents of the University and in accordance with their rules, and that only those persons who have received a baccalaureate degree in course from a college or university duly authorized to confer the same shall be exempted from this preliminary examination.

This statute had its origin in the widespread conviction that something must be done to improve the quality of the medical student as the first step toward checking the entrance into the profession of illiterate practitioners who swell the ranks of charlatanry and degrade the title of Doctor. We must not only narrow the exit from our medical schools by rigid examinations, but we must guard the entrance to them as well. Such was the object of this legislation, and it is creditable to some of our medical colleges, all of which are mainly private enterprises, that they received the new regulation with approval.

Signs of opposition, however, *on the part of some of the schools* have already appeared, and with the opening of the present Legislature a bill was introduced to repeal the statute, which only went into effect in October last. This bill is known as the Brown bill; it has already passed the Senate and has been sent to the House, where we hope it will be defeated. The preliminary examination calls for very moderate educational requirements, but it is sufficient to deter very ignorant persons from attempting to study medicine. *It may bring about a considerable reduction in the income of the schools*, but it will be a great gain to the public if the number of physicians is diminished and the quality improved.

EDITORIAL NOTES.

HOME.

A WORD OF CAUTION TO ADVERTISERS.—We wish to state distinctly that no person is authorized to obtain advertisements for THE JOURNAL without the written authority of our business manager, Mr. J. Harrison White. The official programme of our annual meeting will contain no advertisements, and representations by outside parties that they have authority to obtain advertisements in the name of the American Medical Association, or in connection with the publication of its programme of proceedings, are in every instance fraudulent.

THE TENTH INTERNATIONAL MEDICAL CONGRESS.—We published last week, as requested, a circular issued by a committee of American physicians, earnestly inviting the medical men of this country to attend the meeting of the International Congress, which will convene at Berlin, August 4–9, 1890. We recognize the eminent ability of the gentlemen who compose this American committee of invitation, and will even concede that better men could not be chosen; but in the recommendation of names to constitute that committee we are at a loss to know why the Alleghenies should form a dividing line, and that such cities as Buffalo, Detroit, Cleveland, Pittsburg, Cincinnati, New Orleans, St. Louis, Chicago, Milwaukee, St. Paul and San Francisco—indeed, the entire valley of the Mississippi and the Pacific coast, should not be permitted a single representative. The omission may have been entirely accidental, and yet it is none the less noticeable.

MEDICAL ASSOCIATION OF THE DISTRICT OF COLUMBIA.—At the annual meeting held April 1, 1890, the following officers were elected for the ensuing year, viz: Dr. J. O. Stanton, President; Dr. H. C. Yarrow and Dr. J. H. Mundell, Vice-Presidents; Dr. George C. Ober, Secretary; Dr. S. S. Adams, Treasurer.

DR. SEAVER, college physician at the Yale University, has a plan for providing a small private hospitals for sick students, who cannot be properly cared for in their own quarters. He wishes to secure a fund, yielding $700 annual income, which with the moderate fees paid by the patients, will meet the necessary expenses for this undertaking.

AN EPIDEMIC OF JAUNDICE.—The *Maritime Medical News* states that Queens County and Charlottetown, P. E. I., have been visited by an epidemic of jaundice. Children were largely affected, although no condition of age, sex or position was discoverable as conferring immunity against it. In adults the complaint was at times limited to the reported feeling of "biliousness," while two, three or four of the children of the family would be distinctly marked with jaundice. In this and other peculiarities, the disease strongly suggests that a bacterial causation underlies the epidemic prevalence of jaundice.

THE MEDICAL INTERMEDIARY AT HOT SPRINGS.—The Common Council of Hot Springs, Ark., has voted to notify incoming visitors to that place to beware of the extortionate "drummers" of a certain class of medical practitioners who infest that resort. This notification was ordered to be done by means of a circular distributed on the railroad trains. If the newspaper correspondents are correct, at least one-half of

the fifty physicians living there have employed train-drummers to bring them patients and these people have exacted half of the regular monthly fee of twenty-five dollars, ordinarily collected from the victim in advance. Municipal ordinances have been passed to check this pernicious system, but they failed of their object until some one suggested that a printed circular be distributed among the visitors, while they were yet at a distance on the train. Before this was done the drummer laughed at the efforts of the law-givers, but now he is greatly excited, and is engineering to have the circulars withdrawn.

A THOUGHT FROM DR. O. W. HOLMES.—"When the hospitals are invaded by the novelist, he should learn something from the physician as well as the patients." This is the appropriately genial and wholesome sentiment offered by Dr. Holmes in the April number of the *Atlantic Monthly*. It will fit into many another situation in life in addition to that for which it is immediately designed. It might be concentrated so as to read: "Don't be too morbid."

FOREIGN.

FEVER IN SIBERIAN PRISONS.—At one of the prominent political prisons in Siberia there were in a single month, 275 cases of sickness by fever of some sort, but termed "typhoid fever." There were about five hundred prisoners at that place. The hospital accommodations were taxed far beyond their capacity and it became necessary to let some of the fever cases remain in their cells, some of which were at the same time occupied by those who had not had the fever and had not before that been brought into infective relations with the fever.

ACTINOMYCOSIS IN AUSTRIA.—Dr. Albert, of Vienna, addressed the last meeting of the Imperial Society of Physicians of that city describing two cases of actinomycosis recently seen by him, one being a primary infection of the skin and another an abscess of the neck. The latter was operated upon by incision and a thorough scraping out of the mycotic contents. This was followed by recovery. Dr. Albert states that actinomycosis can no longer be regarded as a rare disease. He has seen not less than thirty-eight cases of the trouble within the past few years; of these eight have come under his observation during the present scholastic year. These cases have come to him chiefly from Vienna or its environs. The tracing back of the disease to its cause or to the time at which the mycotic contagium was experienced is commonly attended with difficulty and an uncertainty. This must probably continue to be the case until the laity have come to know that it is a ray-fungus disease and are on the alert to recognize its beginnings. In regard to the question of the increasing frequency of the disease, there appears to be no good reason to accept that position, in view of the fact that it is easy to confuse this with other affections, more particularly with phthisis, in cases where the fungus takes root and grows within the respiratory tract.

EPIDEMIC OF SUPPOSED CHANCROIDAL VACCINATIONS.—The French correspondent of the *Archives of Pediatrics* narrates a case going to show that it is never well to be too hasty in judging of irregular vaccinal cases. At a little town in the north of France, called Matte-sous-Bois, a number of cases, nearly forty, took on unfavorable conditions of the wound after having been vaccinated with lymph taken from the arm of a certain child. The arm in each of these cases became œdematous and painful and thə wound was judged by several practitioners to be an ecthymato-ulcerous manifestation, specific in character. There were hepetic ulcers on the arm in the region of vaccination, some of them as large as a half-dollar silver coin, and attended by free suppuration. Professor Leloir did not accept the diagnosis of the specific nature of the trouble and advised to keep the cases under observation for a few weeks. The time passed by, and in the course of three months, he was able to report that all the alleged chancroidal vaccinations had become healed and that no secondary symptoms had made their appearance.

DR. EDWARD SCHNITZER, better known as Emin Pasha, is expected to be able to return to Egypt during April or May. He signs his letters in some cases at least "Doctor Emin," a name which mingles his medical and political distinctions. By cable despatch, it is announced that he will hereafter enter the service of Germany in that part of East Africa, which is termed "the sphere of German influence," under Major Wissman.

TOPICS OF THE WEEK.

MR. GLADSTONE ON THE MEDICAL PROFESSION.

On Wednesday, March 26, Mr. Gladstone, as Senior Governor of Guy's Hospital, opened a new medical college in connection with that institution. Mr. Gladstone, who was accompanied by Mrs. Gladstone, was met at the entrance to the college by Mr. H. Hucks Gibbs, the President, and the members of the governing body, and conducted, amid the cheers of a large crowd, to the dining hall, where luncheon was served. In responding to the toast of "Prosperity to Guy's Hospital," the right hon. gentleman said he "could not possibly look back on the history of the medical profession without being impressed with the extraordinary degree in which it presents most special features to us. If we travel back—say two or three centuries—we find the medical profession almost without a recognized existence. In the competition with the other great professions, only a short time back, it was nowhere. The great name of Harvey was known, but as regards its social position and influence the time of Dr. Freind and Dr. Mead in the last century was almost the first period to which one could point at which the medical man of this country had assumed a position of influence and power and general recognition. That profession has been steadily rising in power and influence and general respect from that date to this, and it is my belief that it will continue to rise. The growth of civilization, as we call it, in a large and comprehensive, but also in a very loose and indefinite phrase, carries with it the production of many new forms of human infirmities and disease, and men's wants in the medical sphere are the opportunities of the medical man. His position is, in many respects, singularly fortunate and favorable. In the first place I am inclined to doubt for myself whether, as regards the mere question of remuneration, the medical profession does not offer on its threshold as good opportunities of, in some cases, even liberal return with as little risk as either of the other great professions." Having referred in appropriate terms to Sir William Gull, the right hon. gentleman said: "I am delighted when I hear of the creation of great fortunes in this country that are not merely commercial. It is an excellent thing that large fortunes are made in commerce, by the handling of money, by the supply of the country with material goods; but it is desirable that their power and influence should be qualified by the creation of other fortunes, such as now, almost for the first time, we find beginning to be created by medical men. I rejoice to think that the medical man, who spends his talent and strength as freely in the performance of his duty as any member of any other profession, will be able to make a competent and even large provision for his family. Another point upon which I congratulate the profession is its independence. It does not rely on endowment, but on its own exertions directed to meeting human wants. There is no great profession which has so little to say to the public purse, and which so moderately and modestly dips its hand into that purse. It is not only in the interest of the public, but of the profession itself, that it is eminently self-supporting; and, rely upon it, that principle of self-support does much to maintain its honor and independence, and to enable it to pursue its stately march in the times that have come and in the times that are coming, to form its own convictions, to act on its own principles without fear or favor, for the general benefit of mankind."—*The Lancet.*

THE CAUSE OF PALLOR.

Dr. Oppenheimer has published some careful observations on the blood of 109 pale female subjects (servant girls), conducted by means of Zeiss and Thomas' hæmocytometer and Gowers' hæmoglobinometer. He considers the lowest number of corpuscles per cubic millimetre in a normal state of health as four million, and the lowest amount of hæmoglobin in health 90 per cent. He also agrees with Gräber's dictum: "Number of corpuscles and hæmoglobin both diminished equals acute and chronic anæmia. Number of corpuscles diminished, hæmoglobin relatively increased, equals primary chlorosis or pernicious anæmia. Number normal, hæmoglobin diminished, equals chlorosis." In severe cases of chlorosis, with tendency to faintness, headache, heart symptoms, and œdema without albuminuria, the hæmoglobin varied from 30 to 50 per cent. In fifty-five of the cases the condition of the blood was normal. These patients were found to be suffering from phthisis, cardiac disease (compensated), gastric ulcer, and various affections of stomach, intestines or genital organs. Phthisis of itself—that is to say, before hæmorrhage or diarrhœa or profuse expectoration had come on—appeared to have no effect on the blood. An interesting result was obtained in connection with gastric ulcer. In simple ulcer the blood was normal, except when there had just been hæmatemesis, but in carcinoma of the stomach both the number of the corpuscles and the hæmoglobin were subnormal. Pale girls sometimes take iron for a long time without any visible improvement. Dr. Oppenheimer finds that such patients are not anæmic, but chlorotic from some uterine or other affection, so that when the blood is found to be normal it is advisable to make a vaginal examination. The pallor of patients with normal blood appears to be due to the insufficient filling of the cutaneous capillaries. From the observations of Dastre and Morat there would seem to be an antagonism between the blood-vessels of the skin and those of the abdomen, so that if one of these systems becomes dilated, the other, by an automatic reflex action, invariably becomes contracted. Because of the fact that irritation of the depressor nerve of the heart induces dilatation of the abdominal vessels and contraction of the cutaneous vessels, Dr. Oppenheimer believes that the pallor of phthisis, cardiac diseases and kidney mischief is due to reflex action. In these affections the heart has extra work to do, and this affects, by means of the depressor nerve, the vaso-motor centre, causing a diminution of the cutaneous flow, and, consequently, a dilatation of the abdominal vessels. The pallor observed in most inflammatory affections of the hypogastric viscera may probably be explained also by the reflex action of the hyperæmic abdominal vessels upon the calibre of the cutaneous vessels.—*The Lancet.*

THE DEVELOPMENT OF CULTIVATED MEN.

Upon his installation as President of Columbia College, a few days since, the Hon. Seth Low defined the aims of Columbia College in terms which apply to all of the better institutions of learning, as follows:

"She (Columbia) aims to develop the cultivated man, the educated gentleman; the man who, without being a specialist in anything, has been educated enough in all directions to be in sympathy with all learning; the man who knows enough about the past to recognize the value of it and of all experience, but who is not bound down by the past; the man who knows enough about the present to glory in its achievement and its promise, but who never forgets what it means of indebtedness to those who have gone before, to be 'in the foremost files of time.' In a word, she aims to develop the thoughtful and well informed citizen and to fill him with her own high aspirations as to his citizenship and his life. The splendid products of this work adorn the history of the city and the nation from the beginning of our career. Columbia College believes that *the specialist, because he is a specialist, ought first of all to be a broadly developed man.* Side by side with these men of a general culture and a professional training Columbia aims to contribute in increasing numbers still another precious type to the scholarship and citizenship of the times. She always has been doing something, she aims to do systematically more and more of the original work which belongs especially to our conception of a University in philosophy, in law, in science, and in every branch of learning. She aims to develop the patient student whose controlling desire it will be to add something to the sum of human knowledge."—*North American Practitioner.*

DO HEADS GROW WITH ADVANCED AGE?

Some amusing letters have appeared in a daily contemporary in regard to an alleged steady increase in the size of Mr. Gladstone's head, which, it is said, is rendered manifest by a progressive enlargement in the size of the hat required to cover it. The correspondence exhibits an extraordinary ignorance of well ascertained facts; for if there is one thing which would be acknowledged by all anatomists and physiologists, it is that the nervous system, like other parts of the body, undergoes atrophy with advancing age—an atrophy that pervades every tissue, and is as apparent in the thinning of the vocal cords that alters the voice to "childish treble," as in the shrunk shanks for which the "youthful hose, well saved, are a world too wide." No reason can be assigned why the brain should escape the general change that affects the digestive and the circulatory systems alike. Its attributes and faculties attain their highest excellence at or before mid-age, and from that time forth exhibit only a steady decline. To compare Mr. Gladstone with Napoleon, respecting whom a similar story is related, is absurd. The head of Napoleon may have grown between 20 and 45, because his brain was greatly exercised during the last ten years of the past century and the first ten of the present; but no calls have been made on Mr. Gladstone of late years at all comparable to the strain on the mental and bodily powers of the French Emperor during that eventful period. The ossification of the sutures of the cranium practically prevents increase of the volume of the brain in advanced life; and, even granting some slight increase, such increase would be compensated for by the attenuation of the cranial bones which is well known to occur in old age. A change in form there may be, but none in size.—*The Lancet.*

PRECAUTIONS AGAINST CHOLERA IN CAUCASIAN RUSSIA.

According to the *Voljsky Vestnik*, 1890, February 21, the Caucasian governor-in-chief has issued an order of the day (*prikaz*) in which, while pointing out that cholera still prevails in Mesopotamia and Persia, and that it is very possible that the disease may spread to the Caucasian military district, he lays down a series of precautionary measures to be immediately adopted all over the district. The chief measures are as follows: Strict sanitary supervision of barracks, hospitals, and lazarettes; the formation of military sanitary commissions; arrangements for opening cholera wards and infirmaries; special courses for army surgeons and medical assistants (*feldshers*) in connection with the first aid to cholera patients, and so on.

PHARMACOPŒIAL REVISIONS.

There seems to be a general tendency at present among civilized nations to put their pharmacopœial houses in order. The last edition of our own Pharmacopœia is hardly five years old, and already an Addendum is required. Germany, Holland, Russia, and the Scandinavian countries are busily overhauling their formularies. Our Transatlantic cousins are determined not to be left behind in the race for medicinal perfection. It is announced that a meeting of the various incorporated and pharmaceutical bodies of the United States will be held at Washington in June of this year, for the purpose of revising the United States Pharmacopœia.—*British Med. Journal.*

SURGERY IN VIENNA.

In the last few years there have been twelve Cæsarean sections in Chrobak's clinics. They were all made after the Porro method, and in no case was child or mother lost. In the last thirty cases of uterine fibroids removed by the extra-peritoneal method of amputation there were but three deaths, and the mortality in simple ovariotomy has been reduced to almost *nil.* The most thorough antiseptic precautions are observed here, and to this are attributed these wonderful results.—Corr. *Medical News.*

THE HYGIENE OF INFANTS.

The Paris Academy of Medicine has just opened to competition a prize of the value of 1,000 francs for the best work on the hygiene of infants. The following is the question proposed: To determine what are, in the artificial feeding of infants, the value and the effects of raw milk, warmed or boiled milk respectively. The papers, which should be written in French, the other academical rules being observed, are to be forwarded to the Academy before March 1, 1891.

PRACTICAL NOTES.

CONCENTRATED SOLUTION OF MAGNESIUM SULPHATE AS AN ENEMA.

Dr. J. T. Watkins in his inaugural thesis presented to the Gynecological Society of Chicago, stated (*Medical News*) that after reviewing the literature, and reporting a number of cases in which the enemata had been used, he summarized its advantages as follows: 1°. Its action is local. 2°. It seldom fails, and produces copious stools. 3°. The time of action is short. 4°. The bulk is small, causing but little, if any, discomfort to the patient. 5°. It is as unirritating as a simple enema. Its certainty of action has become so well recognized in the New York Woman's Hospital that it has been used in nearly all the operative cases, as the cathartic preparatory to operation, for the last six months. It is best administered with the patient in Sims' position, the hips being elevated by a pillow; and when much tenderness exists it should be given through a large rubber catheter passed well up into the bowel. The patient is to be instructed to allow the abdominal muscles to remain lax, and, if necessary, the nurse is to keep up pressure over the anus to cause it to be retained for at least fifteen or twenty minutes. If the bowel should fail to expel the exuded liquid, a rectal tube should be inserted to allow its escape. Two ounces have been retained, without bad results; but Christison reports a case of death in a boy ten years old, where two ounces were taken by the mouth without being followed by purging. Where it is retained, the sphincter ani is likely to be strongly contracted, and great relief will follow forcible dilatation under an anæsthetic, which will also have a good effect upon the chronic constipation usually present.

The following is the formula he uses:

℞ Magnesii sulph. . . . . 2 ounces.
Glycerine . . . . . 1 ounce.
Aquæ q. s. ad. . . . . 2 ounces.
M.

The solution is made more readily, and its power of diffusion increased, by the addition of glycerine. He has used three and four ounces of the salt, but does not see that it has any advantages over the smaller amount.—*Cincinnati Med. Journal.*

THE OLIVE OIL TREATMENT OF GALL-STONES.

When some years ago some cases of successful evacuations of gall-stones in attacks of biliary colic following the ingestion of large quantities of olive oil were published they were received with some incredulity, which passed into ridicule when it was found that the oil itself was evacuated in the form of saponified pellets. Nevertheless, the practice was not abandoned in some quarters, and from time to time further successes were claimed for this singular form of medication. Recently Dr. Rosenberg has related three such cases (cited in the *Gaz. Hebd.*, No. 8). The first was a patient aged thirty-six, who had suffered from gall-stone for several years and had been treated without result. The gall-bladder was enlarged. The patient during two weeks drank a litre of olive oil with only once vomiting, and at the end of that period the liver and gall-bladder had notably diminished in volume. She had remained free from colic eighteen months after treatment. The second case was that of a workwoman aged thirty-seven, who was attacked with biliary colic. There was slight icterus, which always increased at the menstrual periods. The liver reached for three fingers breadths below the ribs. She was given 200 grams of the oil mixed with a little menthol and the yelk of egg. Next day the pains had disappeared and the liver had lessened in size. The jaundice and pruritis persisted; so another similar dose was administered, when these signs also disappeared. For several days after she passed biliary calculi. The like result was obtained in a third case, aged thirty-eight, after nine years' suffering from attacks of hepatic colic unrelieved by many "cures" at Marienbad and Carlsbad, although on each occasion she had passed some small calculi. Rosenberg states that of twenty-one cases treated on this plan there are only two in which it failed. He found by experiment that large doses of olive oil increase considerably the flow of bile and diminish its consistence. And he mentions, on the authority of Cantani, that in Italy, where olive oil is taken largely as an article of diet, gall-stone is less frequent than in other countries. Lastly, Rosenberg would not advise recourse to this remedy until other methods had been tried and failed; but, as he truly says, it may well be prescribed before advising recourse to cholecystotomy.—*The Lancet.*

BRUNNER (*Schmidt's Jahrbücher*), believes that *raw* catgut is easily rendered aseptic. His method of preparing it is as follows: The catgut is first scrubbed with a potash soap, then placed for twelve hours in ether, and then for a time in a 1:1000 watery solution of sublimate. It is preserved in a solution composed of sublimate 1 part, glycerine 100 parts, absolute alcohol 900 parts. Before using, the gut must be placed in 1:1000 watery sublimate solution. The author's experience with gut prepared in this manner shows that it is absolutely safe and unirritating to the tissues. Referring to the use of silk and linen sutures and ligatures, Brunner says that though they may be thoroughly disinfected by boiling, experience has shown that even then, if placed deeply in the tissue, they will occasionally excite suppuration.—*Med. News.*

SOCIETY PROCEEDINGS.

Philadelphia County Medical Society.

Stated Meeting, January 22, 1890.

THE PRESIDENT, W. W. KEEN, M.D., IN THE CHAIR.

DR. ANDREW GRAYDON read a paper entitled

NOTES ON THE USE OF STATIC ELECTRICITY IN GENERAL PRACTICE.

To answer the many inquiries that come to me as to the results obtainable from this agent I present this paper. Living as we are in this age of discovery, when new drugs and operations are being brought to our notice, we are prone to overlook the older forces.

It is of one of these latter that I am to address you. It is a powerful auxiliary in the practice of medicine, and has been used for a number of years, but never in its present reliable form.

Much of the disrepute into which this form of electricity has fallen has been due to the unreliable form of the instrument with which we had to work. Changes of seasons, humid atmospheres, location of offices, lack of proper appliances, expensive outfits, have all tended to create in the physician's mind a distrust, or a disinclination to investigate by practical experience the merits of this agent. All these objections, to a very large extent, have been done away with in the Waite and Bartlett machine.

I have no theories to advance in this paper, simply giving what I have demonstrated. And I want to say, at the outset, that I was driven to the use of electricity because I could get results from it not to be had from other modes of treatment.

It is a fundamental truth that prejudice should never be allowed to stand in the way of progress; that no student should be hindered in his research after positive forces by the existence of a bias in the opinions of his fellows. The rules that bind the physicians to his work should not be arbitrary. Results sought for come along different lines, but they bring up at the same point. We are working primarily for curative ends; must we all tramp in the same ruts, or over the same foot-worn paths? Are there no roads to success but those laid out by other faithful workers? Certainly our medical training and experience have taught us that different ones are achieving success, but not by the same methods.

And now, in this matter of electricity, why is it that you will not allow these principles to have free play? Is it not a fact that the whole use of it has been handed over as the legitimate field for irregulars and quacks, and that when a physician in the fold does begin to use it, and use it as you would any valuable agent, medicine, or instrument, he is looked upon with, at least, suspicion.

Is it not so that the profession, as it is now beginning to use it a little, handle it, as it were, with gloves on, lest it soil its hands with the unhallowed dirt of bygone empiricism? I protest that this is not the spirit of fairness and equity, nor should it be that of the nineteenth century. In the face of this prejudice in the ranks of my profession I have followed the leadings of my inquiries, and what I have found is only that which any student and worker may. In these days when the spirit of progress is rife, and medicine is getting to be more and more scientific, when its followers are not satisfied with mere statements but demand proof, I protest against this prejudice, which hinders many from leaving the iron-bound environments laid down in the spirit of the past, intolerant and arrogant, to prove for themselves. There seems to be a fear in the minds of many, a dread, that to be known as one that works with electricity necessarily names them before the profession and public as electricians (and is the profession entirely blameless of encouraging the idea?). Is a physician, therefore a hydropathist because he may perchance, at times, order baths? Is he to be called a Thompsonian because vegetable drugs are found to be prescribed by him? or a homœopath in his ideas because he uses some of his remedies in granular form?

Cannot the general practitioner take advantage of the evolution that is going on around about him without having a sneering opprobrium given him? Are not some of the "foremost specialists" in Europe "men of large family practice?" and would you question their ability to diagnose a fibroma, and treat it by whatsoever means they elect, perhaps by electricity, or must they send their patient to a specialist pure and simple, who may not be able to write a prescription for an ordinary bronchitis?

It is time for physicians to break the thraldom and vindictiveness of the past, and encourage all workers who labor along various lines, as long as they follow truth and science, even if they do not run parallel with moss-grown principles.

I have been in society meetings when the mention of electricity roused a spirit of opposition only equalled in the fierce animal at the sight of red. Or, if not that, it is one of disbelief and contempt. Now this ought not to be. I do not make any extravagant claims for this agent. There is much we do not attempt to do with it; on the other hand, it can be proven to the fair and honest mind that there is a great deal it *will* accomplish, and that painlessly and surely; and that, too, in conditions where no curative agent obtains.

One of the first advantages that makes itself felt to the worker with the static current is the fact

that no disrobing or removal of any clothing is necessary. A lady can be treated, the current applied as directly to the part to be affected through the seal-skin coat as her dressing-gown. This is an important item to the busy physician and modest female. It is not necessary to remove rubber overshoes even to receive the full benefit of an application. You can see how this applies when the patient is treated with the "static insulation," or, as it may well be called, the static bath. Effects equally good are obtained by this method as in "general galvanization," or "general faradization," and with infinitely less trouble and exposure; since, in the latter two forms, almost complete uncovering of the body is essential, while in the first none. Let me explain what is meant by static bath or insulation: A patient sits upon an insulated platform connected by a chain or wire to either pole of the machine, we will say the positive. The negative is joined through another chain to the floor, if uncarpeted, or to the gas-pipe, and thus grounded. The poles of the machine, sliding rods, are then separated widely, and the wheels, glass plates, I should say, are set in motion by means of hand-power, electric, or water-motor. The patient, thus placed, is being charged with positive electricity. According to the conditions of the atmosphere the manifestations of the presence of the current is very apparent; for instance, the hair, unless oiled, stands on end, a tingling is felt throughout the body; more so in those parts unclothed. A séance of this kind, if kept up for ten or fifteen minutes, produces active perspiration.

In neurasthenic patients, in those whose avocations demand large inroads upon their nerve-force, consumption of it being greater than its generation, I have seen speedy and lasting results follow this mode alone, or combined, if indicated, with the spark, direct or indirect. I would not decry "general galvanization," or "general faradization"—they are very valuable methods of treatment, for which we are indebted to Drs. Beard and Rockwell, but in the matter of convenience and speedy results I prefer "static insulation" in a large number of cases. Then, too, it can readily be seen how a series of platforms can be arranged and connected, upon which a number of cases can be treated at the same time, to the saving of much time.

There is a sense of exhilaration following this process which is appreciated and remarked upon by the patient, that I have never seen from other forms. Dr. Morton, of New York, explains the results produced through the law of inhibition, remote parts affected by "polarizing the peripheral distribution of the sensory nerves."

While your patient is insulated the spark can be used by attaching the proper electrode. By using a wooden one, in shape of a point or ball, a very agreeable effect is produced, giving the sensation as of a shower of sand being driven gently against the body, or that of a stream of air. This either through the clothing or on the uncovered skin. These wooden electrodes I also use about the head and face, concentrating the action of the current over regions of the brain and organs of special sense, with good and never bad results. I have applied this form of electrode to eyes with the deep-seated, burning, boring pain, occasioned through nerve-tire from any cause, and obtained prompt and positive relief at one sitting.

As a pain reducer I have never seen static electricity equalled in a single agent. Let me illustrate by a case, trifling it may seem to you and me, but it was a condition which I was called upon to treat or turn away from as unworthy of notice. A young lady presented herself apologetically, in my office, with a bunion that crippled her. As she was a society girl, and very fond of dancing, it was a great annoyance to her. This trifling, little, insignificant bunion put a check on her pleasure. I was brought to see the fact, as it often happens in our practice, that what is almost contemptible in its littleness, enables us to get the confidence of the patient in graver matters. So it happened in this case. I insulated the lady, and, without removing the shoe during treatment, drew with the wooden ball electrode a fine spray of current directly from the painful spot. The application was pleasant, and followed by immediate relief, which was complete after four or five sittings.

Again, a lady, in running for a street car fell upon her knee. She came into my office about three hours after it had happened, with knee swollen, stiff, and painful. Through all the thickness of her clothing the same mode of application removed all pain.

A case of lumbago was given two treatments on consecutive evenings with the metal ball, sparks half an inch long, with the same happy results.

Cases of neuralgic type yield to the spark applied over the painful area. Headaches, not dependent upon stomach derangements, show results that are marvellous. In these, and brain affections generally, the treatment is by the douche and brush; and sometimes the wooden ball and point. I have seen cases, without number, of nervous headaches, in which the drain upon the nerve-forces has been enormous, in the merchant, physician, lawyer, actor, student, housewife, in male and female, yield promptly to this treatment.

In that class of senile headaches which defy routine treatment the results are most happy.

With cerebral hyperæmia I have had the best of effects. Stimulating the vaso-motors, it sweeps on the stagnant current, and equalizes the

circulation, thus relieving the pain and pressure. A case in point will illustrate the treatment of this class of cases:

Mrs. J. has been suffering from chronic cerebral meningitis for six or seven years. During this period she has been treated by the best men in the city. Everything that routine treatment could devise was used. Counter-irritation of every degree of severity was applied, until, as she says, "they told me there was nothing else to be done, and I must suffer all my remaining life." About three years ago she was put upon the static current against the wishes of her physician, who opposed electrical treatment. It is the only treatment that has ever given any alleviation from, and moreover lengthened the intervals between, the agonizing headaches consequent upon the congestive condition, amounting to a mild delirium. Very true, it is only palliative, but before she did not have even *that*. When the treatments are neglected for any length of time, she has a frightful attack of congestive headache.

The *modus operandi* in her case is to insulate her, and with a wire brush connected with a chain to one pole of the machine, the platform upon which she sits to the other pole. The current is drawn from directly over the painful areas, not, however, allowing her to feel it, as the current is not broken, since the operator puts himself in the circuit. I supplement this with the douche.

As I say, I have found this treatment very satisfactory.

(*To be concluded.*)

DOMESTIC CORRESPONDENCE.

Letter from Los Angeles, Cal.

The World's Health Resort.

To the Editor:—The healthiest climates are those in which the winter is not very cold and the summer not very warm and in which consequently there is no great or continual strain on any one class of organs.

The climate of Persia is reputed to be delightful as any on the face of the earth. For nine months a cloud seldom appears in the sky, and during the other three months it is more or less cloudy.

The Mediterranean basin is noted for its mild winters and cool summers and its sunny skies, yet the prevailing winds are its only drawback. Along the para in South America the climate is warm with plenty of sunshine, with a daily shower of rain about four o'clock every afternoon, and yet it is not the most desirable of places for health.

In Southern California there is six months of continual sunshine, and during the other six months while there are occasional rains, say thirty or forty days of rain during the rainy season, the other days are nearly all those of sunshine.

Those who have traveled much and visited Persia, the Mediterranean shores and other health resorts declare that Southern California, along the Pacific coast, has a climate which for the all-year-round is superior to any other on the face of the globe. During the winter we are protected from the cold north winds by the high coast range of mountains and favored by the warm winds from the desert and the warm ocean streams which hug the shore. During the summer the cool ocean breezes which blow daily over the land refresh us. If it were not for this afternoon wind our climate would not be so balmy. The climate is not principally dependent on astronomical facts nor on the sun's position or inclination, but it is dependent on the relation the land bears to the mountain ranges and its position to the ocean and its gulf streams. We are favored with those conditions of temperature, atmosphere, wind, soil, moisture, electricity and geographical position which unite in harmony to make the climate of Southern California almost perfect and uniform. There is literally only two seasons, summer and winter, but the winter is really spring time, which begins with November and ends with April. The mean average temperature for these months is only about fifteen degrees cooler than for the summer months. There is no cold weather, very seldom a frost, never any snow, except up in the mountains at a high elevation. With the winter months begin the rains, but the rainy days are few. After the beginning of the rains vegetation springs up all over the land, and instead of the ground being covered with snow it is a beautiful land of verdure, of thriving grain crops, of fragrant orange groves, a land where grows the olive, the banana, the fig and the pomegranate, a land of flowers and semitropical plants and warm sunshine days; where the warble of the mocking bird enchants the soul of the wearied and afflicted, and his sweet melodies during the night sings the restless mortals into sweet slumbers.

The temperature at midday during the winter reaches the eighties, and while all is spring time in the valleys winter's snowy bounds reigns supreme up in the mountains at the short distance of twenty-five miles from Los Angeles. The mountain peaks are capped with pure white snow, and the varied scenery of summer with all its thriving crops of semitropical fruits and flowers and palms in the valleys, and winter's snowy bounds only twenty-five miles away, the scenery is one of sublime grandeur.

The summer begins with May and ends with October, during which time there is no rain. The average mean temperature for these months is about 67° Fahrenheit, with a daily range of

about 25°. There are no long spells of persistent or intense heat. The temperature rarely reaches the nineties, and when it does it is only for a couple of hours between the hours of 10 A. M. and 2 P. M., after which there is always a cool sea breeze. With such weather we are relieved of that physiological strain on the skin, digestive organs and liver which the spells of persistent and oppressive hot summer days in our eastern cities render mankind prone to, especially diseases of the digestive system. The atmosphere at all times is pure, clear, fresh, calm, yet highly tonic, with a low relative humidity during the hottest part of the day, giving us a moderately dry climate as regards atmospheric humidity. The prevailing winds during the summer are from the ocean, which is cool and refreshing. As night comes on the breeze ceases and the evenings are pleasant, cool, quite comfortable and delightful. The mornings always greet one with a bright rising sun from a refreshing sleep. As there is always a cool ocean breeze it is at all times cool in the shade. The ice pitcher is not needed; for to obtain a cool drink of water it is only necessary to keep the water tank in the shade.

From the above facts we learn that it is not cold in winter nor hot in summer. More than this the climate contains those three essential elements of a perfect climate, namely: dryness, equability and purity of atmosphere. This varied climate is remarkable. Within a radius of fifty miles, yes, in some places only twenty-five miles, embraces almost every variety of climate.

Summer in the valleys and winter up in the mountains from the sea to an elevation of 6,000 feet within a distance of forty miles, and a very attractive country with its novelty and beauty of its varied wide scenery of sea and rolling valleys, and amphitheatre of mountains with summer's sunny land and winter's icy mountains within a day's drive. The climate is truly so varied that each mountain, plain and valley, and each city, village and house seems to have a climate of its own. It is only left to each individual person to select for himself that locality which is best adapted to his own peculiar constitution.

The atmosphere is charged with positive electricity, negative electricity is very feeble or *nil*, consequently thunderstorms very rarely occur. The atmosphere contains very little of that deleterious gas-autozone, and where the atmosphere is free from autozone no cloud or fog can form and the oxygen of the air is in a state of purity, hence the healthfulness of the climate. Everyone knows that in localities where clouds and fog predominate such localities are naturally miasmatic and engender diseases of all kinds.

The atmosphere is aseptic, proof of which may be seen in the meat market, where even during the hottest summer days the fresh meats are continually exposed to the air, hanging around in the shops day after day until it becomes cured, or as they term it here, "jerked." The meat is not put in ice boxes or refrigerators to keep it sweet and fresh, but it is kept sweet and fresh and free from putrefaction by hanging in the open air. The soil is principally a dry sandy soil, very porous and well drained by a gradual slope of the land toward the sea. There is no stagnant pools of water for the development of malaria and other miasmatic diseases. For a place of residence for the health, pleasures, and comforts of life Southern California is truly a paradise. There is every advantage for the pleasures of out door life. There are more than three hundred sunshine days in the year to be out doors. There is every facility for exercise such as riding and driving over the beautiful valleys, walking and climbing mountains, hunting and fishing, rowing and sea bathing, which can be indulged in every month in the year, yachting and the pleasures of short ocean voyages along the coast and to the coast islands.

Along the foot-hills within a few miles of Los Angeles is one of the most glorious places for a home for the invalid. Here everything favors health. The consumptive lives in ease, and if he comes here in due time he is almost sure to regain his health and be free from further progress of the disease, and only a few miles from the sea or city, he can conjoin country or mountain life with city or sea life.

For the invalid a home in the country is preferable to the city. Although Los Angeles is so situated, and with all its modern improvements now under way as regards paved streets, drainage, sewerage, suburban hotels, street railway systems, seaside resorts and drives, it is destined to become the largest and most desirable health resort in the world. WM. H. DUKEMAN, M.D.

114 W. 6th street, Los Angeles.

Nephrectomy for Fibroid—Successful.

To the Editor:—The appended report of a remarkable case of nephrectomy, which is published in the current number of the *Indiana Medical Journal*, I deem worthy of a more extended notice, and therefore request that you publish it in THE JOURNAL. Yours truly,

JOSEPH EASTMAN, M.D.

Indianapolis, Ind., April 10, 1890.

"*Case 129.*—Mrs. D., aged 49 years. Referred by Dr. Wands. Operation November 6, 1889. Large nodular tumor in right hypochondrium. Symptoms pointed to cancer of liver. Incision first made 3 inches long, then extended to 8. Introduced the finger, and found tumor adherent in every direction. Separated the adhesions from the abdominal wall, finding that the tumor developed from the region of the right kidney behind the peritoneum. Tearing open the peri-

toneum, separating the extensive adhesions, dealing with many bleeding points and with great difficulty, I was enabled to lift the tumor out of its bed, finding that it developed from the lower half of the right kidney. I ligated the renal arteries with strong iron dyed silk; removed kidney with the tumor. I then plunged a pair of sharp-pointed scissors through the back at the most dependent point of the cavity, from which I removed the tumor, expanding them large enough to introduce the finger; then drew a large rubber drainage tube through the opening, stitching the tube to the external integument; put a glass drainage tube in abdominal wound, having it extend well down into the cavity. Closed the wound with silkworm gut. The patient left the table with pulse of 90. Dr. William Wands kindly assisted me in the operation, the senior class of the College of Physicians and Surgeons also present. The tumor weighed nine pounds, and a cavity connected with the pelvis of the kidney contained three pints of purulent urine. Experts class the tumor as "rhabda myoma," the so-called *striped* myo-sarcoma. (See Greig Smith, p. 496.)"

Represents tumor, Case 129.

American Medical Editors' Association.

To the Editor:—The annual meeting of the American Medical Editors' Association will be held in the Dental Department of the Vanderbilt University, at Nashville, Tenn., Monday evening, May 19, 1890.

Every medical editor in the United States is cordially invited to attend. Matters of great importance to the Editorial Guild are to be presented and discussed. Papers from Dr. F. L. Sim, of Memphis, Tenn., Dr. T. D. Crothers, of Hartford, Conn., and others, will form the programme. Arrangements are being made by which a dinner will be held at either the Maxwell House or Duncan House after the annual meeting. Those desiring to participate in the latter will please send their names on at as early a date as possible.

Will the various journals of the country please make a note of this announcement?

I. N. LOVE, M.D., President.

Office of the President, 3601 Lindell Boul., St. Louis, Mo.

BOOK REVIEWS.

INSOMNIA AND ITS THERAPEUTICS. By A. W. MACFARLANE, M.D., F.R.C.S., Edinburgh; Fellow Royal Medical and Chirurgical Society, London; Examiner in Medical Jurisprudence, Univ. Glasgow, etc. Pp. xv, 366. London: H. K. Lewis. 1890.

This work, although addressed by its author to students and junior practitioners of medicine, will be read with interest and profit by all classes of physicians. The author's style is particularly attractive and he has well covered the ground of his subject. He himself makes great use of the character of sleep as a diagnostic point, and in this connection gives many useful hints. The most noticeable feature of the work is the great attention paid to treatment; insomnia is first studied in connection with each one of the various diseases upon which it depends, and then in every instance the character of the treatment to be adopted follows. The younger practitioners especially will doubtless be pleased to find that the author has given a large number of his own favorite formulæ.

MASSAGE AND THE ORIGINAL SWEDISH MOVEMENTS. By KURRE W. OSTROM, from the Royal University of Upsala; Instructor in Massage and Swedish Movements in the Hospital of the University of Pennsylvania and the Philadelphia Polyclinic, etc. Pp. vi, 97. Illustrated. Philadelphia: P. Blakiston, Son & Co. 1890.

In this volume the author gives an excellent description of the methods of massage and Swedish movement, together with their applicability to various diseased conditions of the body. These methods are rapidly becoming popularized in our own country, and the perusal of such a book as Mr. Ostrom has written will be of great advantage to physicians, for whose use it is mainly intended.

MANUAL OF SKIN DISEASES. WITH SPECIAL REFERENCE TO DIAGNOSIS AND TREATMENT. By W. A. HARDAWAY, M.D., Professor of Skin Diseases in the Missouri Medical College and in the St. Louis Post-Graduate School of Medicine, etc. Square octavo, pp. viii, 434. Price $3. St. Louis: Theo. F. Lange. 1890.

The professors of dermatology in St. Louis seem to be very active at present in a literary way, for besides many papers and clinical reports in the journals, we have been favored with two text-books within the last three months. The present volume is the outgrowth of the author's desire to place a convenient work on dermatology in the hands of his students. Having enlarged upon his original plan he now offers a well writ-

ten and extensive treatise on this subject, and one which will be found serviceable alike to students and general practitioners. The work is arranged in three parts, including an introduction to the study of skin diseases, an alphabetical arrangement of diseases for ready reference, and an appendix containing additional formulæ and a diet table.

ASSOCIATION NEWS.

American Medical Association, Forty-First Annual Meeting.

Section of Laryngology and Otology.

1. "The Value of Different Operations for Nasal Stenosis," by Max Thorner, M.D., Cincinnati, Ohio.

2. "An Anomalous Condition of the Human Voice," by Alexander W. MacCoy, M.D., Philadelphia, Pa.

3. "Suggestions on the Use of Electricity in Ear Diseases," by E. L. Jones, M.D., Florence, Ala.

4. "Glandular Hypertrophy at the Base of the Tongue," by A. B. Thrasher, M.D., Cincinnati, Ohio.

5. "Fractures and Concussions (Contra-Coup) of the Temporal Bone as a Cause of Deafness," by Laurence Turnbull, M.D., Philadelphia, Pa.

6. "The Galvano-Cautery and its Use in Certain Nasal Affections," by Wm. Cheatham, M.D., Louisville, Ky.

7. "Pathology and Treatment of Tinitus Aurium," by A. A. Hubbell, M.D., Buffalo, N. Y.

8. "The Importance of Surgical Means Applied to the Naso-Pharynx in the Relief of Naso-Pharyngeal and Middle Ear Catarrh," by C. W. Richardson, M.D., Washington, D. C.

9. "How Can We Best Utilize for Scientific Study the Clinical Material so Abundant in Large Dispensaries?" by O. B. Douglas, New York, N.Y.

10. "Salol in Acute Pharyngitis and Tonsillitis," by Jonathan Wright, M.D., Brooklyn, N.Y.

11. "Imperforate Auditory Canal," by Seth S. Bishop, M.D., Chicago, Ill.

12. "On Laryngismus," by J. H. Bryan, M.D., Washington, D. C.

13. "Hygiene of the Upper Air Tract," by J. E. Schadle, M.D., St. Paul, Minn.

14. "Note on Nasal Hæmorrhage," by Frank H. Potter, M.D., Buffalo, N. Y.

15. Discussion on Croup and Diphtheria:

I. Their Identity, by D. Bryson Delavan, M.D., New York, N. Y.

II. Their Duality, by J. Solis-Cohen, M.D., Philadelphia, Pa.

III. Treatment: (*a*) Medical, by William H. Daly, M.D., Pittsburg, Pa. (*b*) Surgical, by F. E. Waxham, M.D., Chicago, Ill.

Papers have also been promised by R. Norris Wolfenden, M.D., London, England; H. Holbrook Curtis, M.D., New York; Carl Seiler, M.D., Philadelphia; E. L. Shurly, M.D., Detroit; Clarence C. Rice, M.D., New York, and M. F. Coomes, M.D., Louisville, Ky.

All those contemplating reading papers before this Section are requested to forward their titles to the Secretary at once.

JOHN O. ROE, M.D., Chairman,
28 N. Clinton street, Rochester, N. Y.
FRANK H. POTTER, M.D., Sec'y,
273 Franklin St., Buffalo, N. Y.

Section of Dental and Oral Surgery.

1. Address, by Chairman, J. L. Williams, of Massachusetts.

2. "Relation of Tropho-Neuroses to Disease of the Mouth and Jaws, With Special Reference to Syphilitic Necrosis," by G. Frank Lydston, M.D., of Chicago.

3. "How the Vascular Supply is Connected With the Teeth," by A. O. Hunt, M.D.

4. "Vascular Tumors of the Mouth, and Treatment by Injection," by John S. Marshall, M.D., of Chicago.

5. "Electro-Therapeutics," by John L. Gish, M.D.

6. "The Value of Illustration in the Lecture Room," by L. D. McIntosh, M.D., of Chicago.

7. "Adenoid Growths and their Effect on the Mouth," by E. E. Briggs, M.D.

8. "Cure for Cleft Palate by a Double Flap Operation and Closure with the Buried Tendon Suture," by Henry O. Marcy, M.D., of Boston.

9. "Hereditary Dental Anomalies," by Wm. S. Sherman, M.D.

10. "Diseases of the Gums, and their Treatment," by J. Taft, M.D.

11. "Irregularities of the Teeth Caused by Neurotic Conditions," by E. S. Talbot, M.D., of Chicago.

J. L. WILLIAMS, M.D., Chairman.
EUGENE S. TALBOT, M.D., Secretary.

Pediatric Section.

1. "Practical Points in the Sanitation of Child Life," by J. Berrien Lindsley, M.D., Nashville, Tenn.

2. "Sulphonal in the Diseases of Children," by Wm. C. Wile, M.D., Danbury, Conn.

3. "Untwisting as a Method of Reduction of Club Foot" (with exhibition of apparatus), by Chas. F. Stillman, M.D., Chicago, Ill.

4. "Congenital Phimosis with Adherent Prepuce, and some of its Effects," by E. C. Lemen, M.D., Upper Alton, Ill.

5. "Summer Diseases of Children," by W. R. Mackenzie, M.D., Chester, Ill.

6. "Intestinal Diseases of Children," by J. B. Prichard, M.D., of St. Louis, Mo.

7. "Constipation in Children," by George F. Cook, M.D., Indianapolis, Ind.

8. "A Plea for Operative Interference in Peritonitis, with Especial Reference to Peritonitis of Obscure Origin in Children," by G. Frank Lydston, M.D., Chicago, Ill.

9. Address by the President of the Section on "School Life in Relation to Child Life."

MISCELLANY.

ASSOCIATION OF AMERICAN PHYSICIANS. — The fifth annual meeting of the Society of American Physicians will be held at the Army Medical Museum Building, Washington, D. C., on the 13th, 14th and 15th of May, 1890. The preliminary programme is as follows:

1. The President's Inaugural Address, Samuel C. Busey, Washington.
2. Consideration of the Revised Constitution.
3. Disturbances of Sleep (discussion)—*Referee*, S. Weir Mitchell, Philadelphia; *Co-Referee*, Charles F. Folsom, Boston.
4. Methods of Diagnosis in Diseases of the Stomach (discussion)—*Referee*, Francis P. Kinnicutt, New York; *Co-Referee*, F. C. Shattuck, Boston.
5. Inflammations of the Appendix and Cæcum and the Duty of the Physician regarding them, Norman Bridge, Chicago.
6. Anæsthetic and Non-Anæsthetic Hysteria, Charles L. Dana, New York.
7. Seizures Characterized by Shock and Loss of Consciousness, Israel T. Dana, Portland.
8. The Diathetic Cause of Renal Inadequacy, I. N. Danforth, Chicago.
9. Antisepsis in Midwifery, William T. Lusk, New York.
10. Varicose Aneurism of the Arch of the Aorta, William Pepper and J. P. C. Griffith, Philadelphia.
11. Natural History of Typhoid Fever, James E. Reeves, Chattanooga.
12. What can and should be done to Limit the Prevalence of Tuberculosis in Man? Edward O. Shakespeare, Philadelphia.
13. Migraine, Wharton Sinkler, Philadelphia.
14. Etiology of Pleurisy, especially in Relation to Tuberculosis, A. A. Smith, New York.
15. Report of Cases of Angio-Neurotic Œdema, Samuel B. Ward, Albany.
16. Notes of a Case of Acronugaly, by J. E. Graham, Toronto.
17. A Case of Acute Pancreatitis, by R. H. Fitz, Boston.
18. Demonstrations of Pathological Specimens, W. T. Councilman, Baltimore.

The Constitution provides that papers shall not exceed twenty minutes in the reading.

LETTERS RECEIVED.

Dr. A. G. Kimball, Battle Creek, Mich.; Dr. C. E. Lundgreen, Denver, Col.; Dr. Wolfred Nelson, New York; Dr. F. S. Crossfield, New London, Conn.; Dr. W. O. Davis, New York; Sharpe & Smith, Chicago; Louisville & Nashville Railway Co., Nashville, Tenn.; Dr. Henry I. Bowditch, Boston; the Antikamnia Chemical Co., St. Louis, Mo.; Dr. Jerome Cochran, Montgomery, Ala.; Dr. R. M. McFall, Mattoon, Ill.; Dr. R. H. Harrison, Columbus, Tex.; Rio Chemical Co., St. Louis, Mo.; Thomas Leeming & Co., New York; R. G. Dun & Co., Chicago; Annals of Gynecology and Pædiatry, Philadelphia; The Dixie Doctor Co., Atlanta, Ga.; Dr. J. A. Freeman, Millington, Ill.; La Lumiére Electrique, Paris, France; State Medical Society of Arkansas, Little Rock, Ark.; Société Obstétrical et Gynécologique de Paris, Paris, France; Dr. C. H. Hunt, Stanwood, Ia.; Dr. John Wright, Clinton, Ill.; Dr. A. A. Burge, Osanda, Ga.; Ward Bros., Jacksonville, Ill.; August Spankus, Milwaukee, Wis.; Dr. Richard J. Dunglison, Philadelphia; Dr. Alfred Stille, Philadelphia; Dr. F. J. Groner, Big Rapids, Mich.; J. H. Vail & Co., New York; Dr. J. H. Ludwig, La Porte, Ind.; the Upjohn Pill and Granule Co., Kalamazoo, Mich.; the Wm. S. Merrell Chemical Co., Cincinnati, O.; Chesebrough Manufacturing Co., New York; Dr. John F. Moran, Washington, D. C.; Waite & Bartlett Manufacturing Co., N. Y.; Dr. J. Berrien Lindsley, Nashville.

Official List of Changes in the Stations and Duties of Officers Serving in the Medical Department, U.S. Army, from April 5, 1890, to April 11, 1890.

Capt. Arthur W. Taylor, Asst. Surgeon, is granted leave of absence for six months on surgeon's certificate of disability, with permission to leave the Div. of the Pacific, by direction of the Secretary of War. Par. 10, S. O. 78, A. G. O., Washington, April 3, 1890.

Major Robert M. O'Reilly, Surgeon, leave of absence granted in S. O. 24, October 16, 1889, amended by S. O. 252, October 26, 1889, both from this office, is extended one month, by direction of the Secretary of War. Par. 30, S. O. 81, A. G. O., April 7, 1890.

First Lieut. Nathan S. Jarvis, Asst. Surgeon, leave of absence granted in S. O. 34, Dept. of the Missouri, March 20, 1890, is extended fifteen days, by direction of the Secretary of War. Par. 22, S. O. 81, A. G. O., Hdqrs. of the Army, April 7, 1890.

By direction of the Secretary of War, Capt. Marshall W. Wood, Asst. Surgeon, is relieved from duty at Ft. Randall, S. Dak., and will report in person to the commanding officer, Ft. Meade, S. Dak., for duty at that post, reporting by letter to the commanding General, Dept. of Dak. Par. 24, S. O. 82, A. G. O., Hdqrs. of the Army, Washington, April 8, 1890.

Official List of Changes in the Medical Corps of the U. S. Navy for the Week Ending April 12, 1890.

Asst. Surgeon S. S. White, detached from the U. S. S. "Minnesota" and wait orders.

Asst. Surgeon H. N. T. Harris, ordered to the U. S. S. "Minnesota."

Official List of Changes of Stations and Duties of Medical Officers of the U. S. Marine-Hospital Service, for the Two Weeks Ending April 5, 1890.

Surgeon P. H. Bailhache, to represent Marine-Hospital Service at meeting of California State Board of Health. April 4, 1890.

Surgeon Walter Wyman, to proceed to Wilmington, Del., on special duty. March 27, 1890.

P. A. Surgeon P. M. Carrington, granted leave of absence for thirty days on account of sickness. March 28, 1890.

P. A. Surgeon W. J. Pettus, granted leave of absence for sixty days, with permission to go abroad. April 2, 1890.

Asst. Surgeon F. C. Heath, to rejoin station, Detroit, when relieved at Cleveland. April 3, 1890.

Asst. Surgeon J. J. Kinyoun, to proceed to Wilmington, Del., on special duty. March 28, 1890.

Asst. Surgeon J. B. Stoner, relieved from special duty on floating hospital "Stevens;" ordered to assume command of the Service at Pittsburgh, Pa. March 28 and April 4, 1890.

Asst. Surgeon A. W. Condict, to proceed to Cleveland, O., for temporary duty. April 2, 1890.

Asst. Surgeon G. M. Guitéras, when relieved at Pittsburgh, Pa., to proceed to Marine-Hospital, New York, N. Y., for temporary duty. April 3, 1890.

Omitted from previous report:

P. A. Surgeon W. J. Pettus, promoted, and commissioned P. A. Surgeon by the President February 26, 1890.